

*Valuation and Financial Statement Analysis for Activision-Blizzard, Inc.*

*by*

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## *ABSTRACT*

*STEPHEN BYRNE WITTMANN: Valuation and Financial Statement Analysis for Activision-Blizzard, Inc.*

*(Under the direction of Dr. Victoria Dickinson)*

Activision-Blizzard (ATVI), a market-leading publisher and developer in the videogame industry, represents a fascinating case study of a player in a relatively new industry as it struggles to find a permanent place among entrenched entertainment staples such as music, television, and movies. The company in its present form is the product of a 2008 merger between Activision Inc. and Vivendi Games, thus creating a massive publisher with rights to several of the industry's most popular franchises, including *World of Warcraft*, *StarCraft*, and *Call of Duty*. This industry domination has not gone unnoticed, and as of March 2013, ATVI's share price has seen a 41 percent leap following strong earnings releases this year. Furthermore, Vivendi Universal, the French parent company, has shown an interest in selling ATVI as the conglomerate moves to divest several of its subsidiaries.

This paper determined that ATVI was a suitable and attractive candidate for an acquisition due to its large cash pile (\$4 billion) and valuable intellectual property. In July, 2013 the company was the target of a buyout led by several prominent executives and investors with the objective of moving the dynamic, growing organization away from the stagnating French conglomerate, Vivendi. This action lent credence to the early opinions reached in this paper following a detailed financial statement and valuation analysis, and should be the beginning of an exciting new chapter for ATVI and its stakeholders.

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## **List of Abbreviations**

ACP	Average Collection Period
AIDO	Average Inventory Days Outstanding
APIC	Additional Paid-In Capital
ART	Accounts Receivable Turnover
ATVI	Activision-Blizzard
Capex	Capital Expenditures
CAPM	Capital Asset Pricing Model
COGS	Cost of Goods Sold
DCF	Discounted Cash Flow
EA	Electronic Arts
EBITDA	Earnings Before Interest, Taxes, and Depreciation
EBIT	Earnings Before Interest and Taxes
EPS	Earnings per Share
EV	Enterprise Value
FIFO	First-In-First-Out
FLEV	Financial Leverage
GAAP	Generally Accepted Accounting Principles
GPM	Gross Profit Margin
IP	Intellectual Property
IT	Inventory Turnover
LIBOR	London Interbank Offer Rate
LIFO	Last-In-First-Out
MMORPG	Massively Multiplayer Online Role Playing Game

NOA	Net Operating Assets
NOAT	Net Operating Asset Turnover
NOPAT	Net Operating Profit After Taxes
NOPM	Net Operating Profit Margin
NOR	Non-Operating Return
PC	Personal Computer
PPE	Property, Plant, and Equipment
R&D	Research and Development
RNOA	Return on Net Operating Assets
ROA	Return on Assets
ROE	Return on Equity
ROPI	Residual Operating Income
SEC	Securities and Exchange Commission
SG&A	Selling, General and Administrative
TTM	Trailing-Twelve Months
WACC	Weighted Average Cost of Capital



# Introduction

Activision-Blizzard (ATVI) is a market-leading publisher and developer in the videogame industry. The company holds rights to many of the most-recognizable videogame franchises in the world, including *World of Warcraft*, and *Call of Duty*. This dominant position gives the company great influence in the industry, but also makes it and its franchises a target for upstart developers on home consoles, PCs, and, increasingly, mobile platforms. In an industry where companies live and die by the renewed popularity of their titles, ATVI cannot afford to become complacent, and must continue innovating and adopting risky new ventures in order to rejuvenate and expand its offerings.

In this paper I aim to present a detailed fundamental and technical analysis of ATVI, drawing upon information presented in recent investor filings and equity research. Following this, I will perform a valuation of the company utilizing several key methodologies, including trading comparables, precedent transaction analysis, and discounted cash flow. Finally, I will offer insight into the company's future prospects and the possibility of it being the target of a buyout. This will provide a first-hand look into the biggest player in an industry that, despite its relatively brief existence, has done more to mold the entertainment culture of the world today than almost any other medium, and whose future is more uncertain than ever.

## Ch.1

### **Section 1.1: Core Business Operations**

In order to analyze ATVI from the ground up, it is important to define exactly what sectors it operates in, as well as its core business structure. ATVI's operations focus primarily on publishing online, personal computer (PC), console, handheld, and mobile games. The company's current organizational structure operates in three segments. These include 1) Activision Publishing, Inc., 2) Blizzard Entertainment, Inc., and 3) Activision Blizzard distribution.

#### **Section 1.1.1: Activision Publishing**

Activision Publishing, Inc. is a leading international publisher of interactive media, focusing on developing and publishing video games based on popular franchises and license agreements. These operations involve the development, marketing, and sales of products which are sold through both retail channels, as well as digital downloads. Activision develops for all major video game consoles, including the Sony Computer Entertainment, Inc. PlayStation 3, Nintendo Co. Ltd. Wii, and Microsoft Corporation Xbox 360. Activision also owns several popular intellectual properties, including the *Call of Duty* franchise. The publisher is currently a subsidiary of Activision Blizzard.

### **Section 1.1.2: Blizzard Entertainment, Inc.**

Blizzard Entertainment, Inc. is a leader in subscription-based massively multiplayer online role-playing games, including the leader in terms of revenue and subscriber base, *World of Warcraft*. Blizzard internally develops and publishes PC games, as well as its online gaming community and service, Battle.net. Blizzard's primary forms of revenue include subscriptions (including game time for *World of Warcraft*), physical boxed products, digital distribution of PC products, and licensing of products to third-party distributors. Blizzard owns the rights to several popular PC franchises, including *World of Warcraft*, *Starcraft*, and *Diablo*. It should be noted that Blizzard, Inc. was originally owned by Vivendi SA and remains a separate entity with individual management.<sup>1</sup> Vivendi SA, is headquartered in Paris and owns a 52 percent stake in the company.

### **Section 1.1.3: Activision Blizzard Distribution**

Activision Blizzard Distribution includes warehousing, logistical, and sales distribution services through operations in Europe. These services are provided to third-party publishers of interactive entertainment software, as well as internal publishing operations and interactive entertainment hardware. Overall, Activision Blizzard's core operations consist of several powerful publishing and developing operations which continue to lead the interactive entertainment software industry in terms of profitable intellectual properties (IPs) and revenue creation.

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<sup>1</sup> *Activision-Vivendi Merger: 5 Key Points*, Simon Carless

#### **Section 1.1.4: Locations**

Activision Blizzard's corporate headquarters is located in Santa Monica, California while Blizzard's development studio is based in Irvine, California. The corporation maintains operations in the U.S., Canada, the United Kingdom, France, Germany, Ireland, Italy, Sweden, Spain, Norway, Denmark, the Netherlands, Australia, India, China, South Korea and the region of Taiwan. Sales offices are located domestically in Texas, Minnesota, and Arkansas, and studios are in Texas, California, Iowa, New York, and Wisconsin. Domestic manufacturing and distribution centers are maintained only in California.<sup>2</sup>

Activision Blizzard has a strong international and domestic presence, with major studios and offices located in almost every major country of the world (ATVI 10-K). Internationally, Activision Blizzard's corporate offices are based in the Netherlands, the United Kingdom, and France. International sales offices are spread across the Netherlands, Switzerland, Argentina, Denmark, Italy, Spain, Mexico, Canada, Germany, Norway, France, Brazil, China, Australia, Taiwan, and Singapore. Studios are located in Ireland, The United Kingdom, Canada, South Korea, and China. Finally, international manufacturing and distribution centers operate in the United Kingdom, Germany, China, and the Netherlands.

#### **Section 1.2: Supply and Demand Considerations**

The videogame market is a demand-driven industry where a company is only as valuable as its most successful franchise. Next, I discuss ATVI's recent sales patterns and the strength of the company's development talent.

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<sup>2</sup> *ATVI Inc.-2011 Annual Report*. Retrieved 6/9/2012, from <http://yahoo.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=8444785-12514-55963&type=sect&dcn=0001047469-12-001775>

Activision Blizzard enjoys a strong demand for many of its most revered franchises. This is due primarily to a consistently high-production quality and a legion of long-standing, loyal fans. These games span many genres, from the massively multiplayer online role-playing game (or MMORPG), *World of Warcraft*, to the popular first-person shooter game, *Call of Duty*. *World of Warcraft*, which is operated on a subscription basis, remains the most popular MMORPG in the world, boasting a peak subscriber base of 12 million in October 2010.<sup>3</sup> Meanwhile, the *Call of Duty* series has shattered sales records with each subsequent release. The most recent entry, *Call of Duty: Modern Warfare 3* became the fastest selling game of all time, moving 6.5 million copies on launch day in the U.S. and U.K. alone. More recently, the release of Blizzard's long-awaited *Diablo 3* topped sales of more than 3.5 million copies within 24 hours of its launch on May 15, 2012.

ATVI's valuable franchises and intellectual properties garner it strong demand upon the release of each addition to these series, however many of the company's other products have fallen upon hard times as of late, and failed to gather enough sales to remain viable. Several studios owned by ATVI, including RedOctane, publisher of the once-popular *Guitar Hero* franchise, closed their doors in 2011. This was explained in ATVI's 2011 10-k as a "restructuring plan involving a focus on the development and publication of a reduced slate of titles on a going-forward basis, including the discontinuation of the development of music-based games, the closure of the related business unit and the cancellation of other titles then in production".<sup>4</sup> These sweeping cuts were made to many company-owned studios, as demand for music and rhythm franchises began to run out of steam and effort was focused on trimming down and

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<sup>3</sup> <http://www.ibtimes.com/articles/246147/20111109/world-warcraft-continues-lose-subscribers.htm>

<sup>4</sup> *ATVI Inc.-2011 Annual Report*. Retrieved 6/9/2012, from <http://yahoo.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=8444785-12514-55963&type=sect&dcn=0001047469-12-001775>

supporting other core products and proven intellectual properties.<sup>5</sup> Although demand has fluctuated stronger than usual in recent years, ATVI remains an industry leader in unit sales and overall revenue, mostly due to their steadfast core franchises.

As a publisher and developer, much of ATVI's supply inputs are labor-oriented. The company must maintain a staff in their international studios, as well as sales offices and distribution centers. As of December 31, 2011, ATVI consisted of 7,300 full-time and part-time employees. It should also be noted that 117 of the full-time employees were subject to term employment agreements, most of which were executive officers and select members from the sales, marketing, and product development. In addition, many employees in France, Spain, Italy, and distribution companies in Germany are subject to collective bargaining agreements. No labor-related work stoppages have been reported to date.<sup>6</sup>

The labor supply for positions in the video game industry is relatively lacking, especially in areas such as San Francisco where hiring demand is particularly high. Employers in these areas face strong competition from other studios for qualified talent. According to PR Web, citing a study by WANTED Analytics, "the best markets for recruiting these (game development) skills are Madison (Wisconsin), Denver (Colorado), and Salt Lake City (Utah). These areas are likely to fill job openings faster than the rest of the United States, since hiring demand is low compared to the available talent supply."<sup>7</sup> ATVI maintains most of its facilities in California and New York, where hiring demand is much higher and supply is limited. Because of these considerations, it is reasonable to conclude that the company faces challenges in finding a supply of qualified labor in its area of operations. However, it should also be considered that

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<sup>5</sup> <http://www.gamespot.com/news/redoctane-closed-by-activision-6250760>

<sup>6</sup> <http://yahoo.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=8444785-12514-55963&type=sect&dcn=0001047469-12-001775>

<sup>7</sup> <http://www.prweb.com/releases/2012/3/prweb9254346.htm>

because of Activision Blizzard's breadth and popular IPs, applicants may find their studios more attractive than a lesser-known entity, thereby alleviating a supply shortage.

Not all of ATVI's jobs fall into the realm of game development. A number of positions must be filled for the finance, human resources, and management fields, particularly at the corporate headquarters in Santa Monica, California. Therefore, these are not affected by the video game developer supply shortages, but rather by their respective supply pools in each area.

### **Section 1.3: Competitive Analysis**

Porter's five forces can provide an understanding of the major competitive and market forces acting upon an organization, and expose future challenges. This analysis is achieved by examining buyer power, supplier power, threat of new entrants, threat of substitute products, and competitive rivalry.

#### **Section 1.3.1: Buyer Power (High)**

A key aspect of measuring buyer power is examining switching costs, or costs incurred by buyers when moving from one company's product to a competitor's. It measures how entrenched buyers become after initially using a company's product or service. Buyers in the videogame industry enjoy relatively low switching costs, which are often as easy as purchasing a game from a competing publisher. An alternative exists with "console-exclusive" games, or software which is only compatible with a specific console, such as the Microsoft Xbox 360, Sony Playstation 3, or Nintendo Wii. In this case, a buyer faces the sunk cost of their first system purchase. However, "companies generally priced their consoles low in order to gain users"<sup>8</sup>, thereby lessening console switching costs. This alternative applies to several of ATVI's most

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<sup>8</sup> Scott Gallagher and Seung Ho Park, Innovation and Competition in Standard-Based Industries: A Historical Analysis of the U.S. Home Video Game Market, IEEE Transactions on Engineering Management, VOL. 49, NO. 1, February 2002

popular products, including *World of Warcraft*, *Starcraft*, and *Diablo*. This software may be played on almost any PC or Mac, which many families already possess for other uses. Therefore, in order to switch to a competing product on a console, the buyer incurs the switching costs associated with purchasing a new videogame console, which may be up to \$350. It should be noted that many of ATVI's games are compatible with multiple videogame consoles, and therefore this switching cost consideration is limited to only several products. On the other hand, ATVI does maintain strong product differentiation with regard to its most successful franchises such as *Call of Duty* and *Starcraft*. These products are seen as unique in the eyes of buyers, as evidenced by first week sales figures where *Call of Duty: Modern Warfare 3* bested its closest competitor, EA's *Battlefield 3*, by 7 million units; a more than 2:1 difference.<sup>9</sup> Ultimately, buyer power in the videogame industry is high, and represents a weakness for ATVI who must rely on product differentiation to deter buyers from purchasing a competing product.

### **Section 1.3.2: Supplier Power (High)**

Video game production is a heavily labor-intensive project, and "due to the heterogeneous nature of game assets, the development requires multi-talented teams consisting of skilled individuals working in seamless collaboration."<sup>10</sup> Because of this specialized skill and talent that goes into software production, as well as long-term support from developers to maintain game communities such as *World of Warcraft*, supplier power is particularly high. However, the videogame industry is not unionized and is unlikely to become so anytime soon, as Mr. Pachter, an analyst at Wedbush Securities explains, "...games don't really work on an assembly line...We're talking about a games industry where the average compensation is well above \$60,000...I just don't think people who make \$100,000 need a lot of protection because

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<sup>9</sup> <http://www.vgchartz.com/weekly/40860/Global/>

<sup>10</sup> Tony Manninen, Tomi Kujanpää, Laura Vallius, Tuomo Korva, Pekko Koskinen, Game Production Process: A Preliminary Study, [http://ludocraft.oulu.fi/elias/dokumentit/game\\_production\\_process.pdf](http://ludocraft.oulu.fi/elias/dokumentit/game_production_process.pdf)



they might have to work overtime.”<sup>11</sup> This is certain to be a tumultuous issue as the game development process becomes longer and “crunch time” is extended further. Nevertheless, supplier power remains strong due to the varied and specialized nature of the labor required to produce a videogame, and is a threat to ATVI.

### **Section 1.3.3: Threat of New Entrants (Low)**

Due to the dynamic environment of the videogame industry, barriers to entry are relatively high. The industry is characterized by “very short technology life cycles, which typically last six years or less for each hardware platform generation and each new generation of technology is associated with dramatic improvements in the performance capabilities”<sup>12</sup>. This makes it extremely expensive to begin developing or publishing, as the long development cycles and swift adoption of new technologies create added costs to maintain a competitive space in the market. Furthermore, “the market is an economy of “hits” or “blockbusters”: publishers make 80 percent of their sales on the 20 percent of games on sale” (Cadin). New IPs are rarely profitable, with most publishers relying on proven properties to stay afloat. Finally, established publishers and developers hold tremendous competitive advantage due to existing goodwill with consumers, as well as profitable IPs and proprietary knowledge of existing technologies. These high barriers to entry are an opportunity for ATVI to retain its sizable and loyal customer base.

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<sup>11</sup> <http://thinkprogress.org/alyssa/2011/07/27/280717/unionizing-the-video-games-industry/>

<sup>12</sup> Loïc Cadin, Francis Guérin, Robert DeFillippi, HRM Practices in the Video Game Industry:: Industry or Country Contingent?, *European Management Journal*, Volume 24, Issue 4, August 2006, Pages 288-298, ISSN 0263-2373, 10.1016/j.emj.2006.05.002. (<http://0-www.sciencedirect.com.umiss.lib.olemiss.edu/science/article/pii/S0263237306000314>)

#### **Section 1.3.4: Threat of Substitute Products (Low to Moderate)**

The videogame industry has many substitute and alternative products competing with it, such as television, film, music, and other discretionary entertainment purchases. Because of this, videogames must gain a strong competitive advantage in order to stay viable within the entertainment sector. In the videogame industry, “once a particular product technology gains any small lead over competing technologies in terms of its customer network size, there is a tendency for the technology with the larger network to become the industry standard”<sup>13</sup>. ATVI has been successful in this regard, establishing several popular franchises which maintain dominant positions in the industry. *World of Warcraft* maintained 10.2 million subscribers as of December 31, 2011 (ATVI 10-k), and the *Call of Duty* series holds a powerful online community, unparalleled in the home videogame market. Intellectual property is heavily protected in the videogame industry, with everything from artwork to sound placed under the auspices of protection. This can become more difficult as games and properties move overseas, as looser protection laws and enforcement in countries such as China can threaten the sanctity of IP rights. Oftentimes, smaller developers may clone a successful game using similar, recognizable assets and presentation to garner attention for their product and feed off the popularity of the original. However, combating these threats can be costly and are often not worth the effort, as many consumers can recognize a fraudulent clone, and quality often suffers. Ultimately, these IPs remain exclusive to ATVI and receive little competition from substitute products within the industry, which are unable to replicate the experiences offered. These unique features are a strength of ATVI and provide a strong competitive advantage over competing products.

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<sup>13</sup> Venkatesh Shankar, Barry L. Bayus, Network Effects and Competition: An Empirical Analysis of the Home Video Game Industry, *Strategic Management Journal* Strat. Mgmt. J., 24: 375–384 (2003) Published online 18 November 2002 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/smj.296

### **Section 1.3.5: Competitive Rivalry (Moderate to High)**

The videogame industry is often characterized by its intense competition, which is “driven by short product lifecycles, regular price cuts, extensive development and marketing expenditures as well as competition with other entertainment industries and forms of amusement.”<sup>14</sup> Steep development costs leave little room for profits and many developers rely on similar strategies and genres to attract customers. Fortunately, ATVI holds a dominant position in several of the leading genres, including first-person shooters (*Call of Duty*), massively multiplayer online role-playing games (*World of Warcraft*), and strategy games (*Starcraft*). Because of these entrenched positions in lucrative genres, ATVI is less-affected than other smaller publishers who rely on new, unproven IPs. Nevertheless, high production costs and stiff competition from publishers/developers like EA remain a constant threat to ATVI’s market dominance.

### **Section 1.4: Corporate Website Disclosure**

A primary source of information on a company’s operations is its corporate website. Here, information can be found on primary business segments and structure, recent news releases, and SEC filings. Degrees of transparency can vary widely among corporate websites, and this section focuses on examining the disclosure quality of ATVI’s website.

Activision Blizzard’s corporate website is broken into several sections of content, including “About Us”, “Corporate Governance”, “Investor Relations”, “News and Events”, and “Careers”. Each section is then divided into several subsections, detailing more specific aspects of each area. Along with these divisions, the site has separate links to Activision and Blizzard’s individual websites.

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<sup>14</sup> Nicolas Bombourg, World Video Game Companies, PR Newswire, NEW YORK, Feb. 21, 2012

The “About Us” section features several paragraphs yielding a broad description of the company’s function, corporate headquarters, and notable franchises, along with locations of international branches. The section also includes a comprehensive list of its locations, ranging from corporate headquarters to sales offices and studios. ATVI then provides a list and brief description of its Board of Directors, as well as Senior Corporate Management. It should be noted that several members of the Board of Directors were executives of ATVI’s parent company, Vivendi.

Following this, the “Corporate Governance” section includes a listing and description of the Board of Directors, similar to that found in the “About Us” section. Also included is a collection of links to various corporate documents and charters. These include the Certificate of Incorporation, Bylaws, Audit Committee Charter, and Code of Conduct. This section seems to contain a comprehensive list of useful business documentation, and falls in line with what would be expected of a transparent, well-documented corporation.

Next, ATVI provides an “Investor Relations” area, which houses many important documents, filings, and reports. Among these include a list of SEC filings, such as Annual Reports, Current Reports, and Quarterly Results. Each contains a PDF which may be easily downloaded to view the information. Reports are up-to-date, including the most recent quarterly filings. Also provided is a Games Calendar, detailing upcoming game releases from the company, as well as specialized content release dates for games such as *Call of Duty*. The section contributes audio and PDF links for recent events in the Events and Presentations tab, along with the option to be notified of upcoming events. Finally, the “Investor Relations” category grants detailed stock information such as the last price, opening price, and daily highs and lows. Also yielded are a Stock History section and Dividend FAQ. The Stock History section offers the ability to look up

daily stock details, along with yearly comparisons of stock prices. The Dividend FAQ answers several common questions with regard to the company's dividend policy, such as "Does Activision Blizzard pay a dividend?", and "Am I entitled to a dividend"?

The last two tabs provided by the website are "News and Events", and "Careers". The first offers links to press releases covering recent notable events, as well as an option to sign up for email alerts. The latter includes links to both Activision and Blizzard's individual career websites, as well as the ATVI joint career site, giving information on job openings to prospective candidates.

Overall, ATVI's corporate website provides interested parties with a bounty of relevant information on the company and its business functions. Most importantly, recent SEC filings and other investor-centric information is easily obtainable. This transparency may act as a form of "warranty", reducing information asymmetry and allowing current and potential investors, creditors, and even competitors to more accurately assess the value of the company.

## **Section 1.5: Asset Composition**

Assets and the relative makeup between them on the balance sheet is a useful window into a company's operations and the risks and strengths that accompany holding specific assets. This asset makeup may then be observed over a series of years to better understand changes in the organization's strategy and asset-deployment.

As of December 31, 2012, ATVI's total assets are valued at \$14,200 million. Of this, \$6,274 million, or 44 percent, is composed of current assets. The remaining \$7,926 million (56 percent) is made up of long-term investments, software development, trademark and trade names, goodwill, property, plant, and equipment (PPE), and intangible assets. Of total assets, notable segments include cash and cash equivalents of \$3,959 million (28 percent), short term

investments of \$416 million (3 percent), deferred income taxes of \$487 million (3 percent), trademark and trade names of \$433 million (3 percent), and goodwill valued at \$7,106 million (50 percent). This breakdown reveals a heavy dependence on goodwill to bolster ATVI's assets, most likely stemming the 2008 merger between Activision and Blizzard Entertainment (Vivendi).

When compared to some key competitors, ATVI's asset composition bears strong similarities, as well as some striking differences. This is especially evident when compared to EA, the second-largest publisher/developer in the industry with regard to assets, right after ATVI. Although EA's current assets of \$1,951 million comprise 40 percent of total assets (compared to ATVI's \$4,332 million at 35 percent), both company's cash and cash equivalents, accounts receivable, and inventory make up similar portions of total assets. EA's cash and cash equivalents are \$919 million, less than a fourth of ATVI's \$3,959 million, but both represent close to 20 percent or more of total assets for their respective organizations (19 percent for EA and 28 percent for ATVI). Similarly, EA has receivables of \$111 million, compared to ATVI's \$707 million, which make up 2 percent of total assets for EA and 5 percent for ATVI. This may suggest EA has stronger policies for receivables collections or ATVI is more dependent on receivables sales than EA. Finally, EA's inventories of \$60 million make up 1 percent of total assets, just as ATVI's \$209 million of inventories do. However, with regard to goodwill composition, the two companies differ dramatically. EA's goodwill is valued at \$1,716 million and makes up only 36 percent of total assets. While this is still a significant portion, it remains far less impressive than ATVI's \$7,106 million of goodwill at 50 percent of total asset composition.<sup>15</sup> This is telling of the valuation of Activision publishing and Vivendi Games preceding the merger that created ATVI in its current state. Clearly, it is believed that the

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<sup>15</sup> *Electronic Arts Inc. 2012 10Q*. Filed 8/02/12. Retrieved 8/26/12, from <http://yahoo.brand.edgar-online.com/DisplayFiling.aspx?dcn=0000712515-12-000004>

company is worth significantly more than the result of just pricing its assets. While this most likely stems from the powerful franchises the company holds, relying on such a large amount of goodwill to boost assets can be dangerous, primarily because of the possibility of goodwill impairments.

Over the last five years, ATVI's asset composition has seen dramatic change, most prominently during the 2008 merger between Activision and Vivendi Games. This merger resulted in the creation of ATVI, driving Activision's individual assets from \$2,531 million to a combined \$14,701 million. Current assets saw a significant decrease as a percentage of total assets following the 2008 merger. In pre-merger 2008, current assets made up 78 percent of total assets (\$1,979 million), while long term assets, property, plant and equipment, and intangible assets held 22 percent (\$552 million). Following the merger, current assets plummeted to 37 percent of total assets (\$5,495 million), while long term investments, PPE, and intangible assets jumped to 63 percent (\$9,206 million). As of December 2012, current assets have risen steadily to settle at 44 percent (\$6,274 million) and have yet to revert to their pre-merger makeup. There have been several significant changes to asset composition since the merger in 2008. Net intangible assets dropped from \$1,283 million in post-merger 2008 to \$68 million in August 2012, while non-current software development rose from an insignificant \$1 million to a \$164 million, now encompassing 1 percent of total assets, indicative of increased investment in new game development in recent years. Also notable was a spike in short term investments since the merger; previously valued at \$44 million, they are now recorded at \$416 million and a significant portion of total assets.

Cash and cash equivalents as a percentage of total assets remained relatively stable over the five-year period, except for a cash buildup seen in 2008, before Activision's merger

with Vivendi. While 2007 had a cash to total assets ratio of 21 percent (\$384 million), pre-merger 2008 had assets that were 55 percent cash (\$1,396 million). This increase may be a product of Activision's 92 percent increase in consolidated net revenues from 2007 to 2008, as well as a cash stockpile in anticipation of "purchases of inventory and equipment, the funding of the development, production, marketing and sale of new products, the acquisition of intellectual property rights for future products from third parties and the completion of the tender offer in connection with the combination with Vivendi Games."<sup>16</sup> Following the merger and thru December 2012, cash to total assets reverted to its previous composition, with an average of 23 percent.

## **Section 1.6 Financing and Liability Composition**

### **Section 1.6.1: Financing**

The financing of a company's operations are a critical consideration for analysis, primarily because of the unique risks and opportunities that stem from different financing structures. A debt-heavy structure increases leverage, and therefore the possibility of magnified future returns. However, if returns do not materialize, losses are also magnified. Conversely, equity financing allows for less risk, but result in considerable complications relating to stockholder whim and opinion.

As of December 31, 2012, ATVI is primarily financed through equity. At this time, there were 2,400 million shares authorized, with 1,111 million issued. Additional paid-in capital was recorded at \$9,450 million. ATVI currently has no long-term or short-term debt. The company has operated on equity financing since its inception in 2008. This is unusual for the industry,

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<sup>16</sup> *ATVI Inc.-2012 10Q*. Filed 8/02/12. Retrieved 8/26/2012, from <http://yahoo.brand.edgar-online.com/DisplayFiling.aspx?dcn=0001104659-12-053747>



where many competitors rely on both debt and equity financing. EA, ATVI's closest competitor, reported \$539 million in long-term debt as of March 31, 2012. Previously, the company relied solely on equity to finance its operations, suggesting an unfavorable cash position for even the industry's largest players. THQ, another competitor, has held \$100 million in long-term debt for the past three years, while Take-Two Interactive has seen its long-term debt increase from \$107,239 million in 2011, to \$316 million as of March 31, 2012. All of these companies finance through equity as well, although at levels far beneath that of ATVI. It should be noted that ATVI's reliance on equity reduces its leverage and thus lowers the chance of volatility in reported earnings. While this may guard the company against downturns in the economy, it also tempers the possibilities of a large upswing of earnings. Additionally, the tax-deductibility of interest makes debt financing attractive and often less "expensive" than equity (when utilizing the WACC model explored later).

#### **Section 1.6.2: Liability Composition**

Similar to asset composition, liability composition provides significant insight into potential risk factors stemming from a company's balance sheet structure. The primary disclosures to be found in liabilities are items which will result in less cash in the future due to obligations to external parties.

ATVI's liabilities are composed primarily of deferred revenues and accrued expenses and other liabilities. As of December 31, 2012, deferred revenues account for \$1,657 million, while accrued expenses and other liabilities total \$652 million. The remaining liability accounts include accounts payable (\$343 million), deferred income taxes (\$25 million), and other liabilities (\$206 million). This falls in line with EA's liability composition, in which deferred revenues and accrued expenses comprise the majority of current liabilities (\$1,044 and \$737) (EA 2012 10Q). Total

current liabilities for ATVI total \$2,652 million, while total liabilities are \$2,883 million. These large amounts of deferred revenue are likely related to game and subscription sales for its online-centric games, in which frequent updates and additions are given, causing the revenue to defer to later periods in which a more-complete service is rendered.

The last five years has seen a significant change in ATVI's liability composition, most notably following the 2008 merger between Activision and Blizzard Entertainment. In 2006, accounts payable stood at \$88.9 million, accrued expenses and other liabilities were \$103.17 million, and there were no deferred revenues. This made total current liabilities \$192.16 million. With regard to long term liabilities, in 2006 other liabilities were just \$1.78 million and deferred income taxes were nonexistent, equaling \$193.94 million in total liabilities.

These numbers contrast greatly with those of 2008 following the merger in which accounts receivable became \$555 million, accrued expenses and other liabilities jumped to \$842 million, and deferred revenues of \$923 million were recorded, totaling \$2,320 million in current liabilities. Also in 2008, other liabilities were \$239 million and deferred income taxes spiked to \$615 million. Total liabilities in 2008 were \$3,174 million, a more than 16-fold increase over 2006 levels. Much of this rise in liabilities stemmed from the 2008 business combination, in which Activision took on the liabilities of Blizzard Entertainment and the Vivendi Games subsidiary.<sup>17</sup>

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<sup>17</sup> *ATVI Inc.-2012 10Q*. Filed 8/02/12. Retrieved 8/26/2012, from <http://yahoo.brand.edgar-online.com/DisplayFiling.aspx?dcn=0001104659-12-053747>

## **Section 1.7: Valuation Considerations**

When valuing ATVI's assets, several considerations must be made, primarily with regard to the variety of assets an interactive entertainment publisher/developer holds and how they retain their value over time. There are two primary methods of valuation; historical cost and fair value. When deciding which method is more appropriate, several factors must be taken into account.

Firstly, historical cost records the value of an asset at its original purchase price. This makes it best-suited for assets such as cash and cash equivalents, whose value changes little over time. This contrasts with the fair value method, in which assets may gain or lose value depending on their current market-price. This approach is more useful for assets such as long-term investments, accounts receivable, goodwill, intangible assets, intellectual property licenses, and property plant and equipment. These assets are more prone to value appreciation or depreciation following their purchase date, and the fair value method may better-represent their current value to financial statement users.

There are several ways to account for the fair value of an asset, and the company's "Management Discussion and Analysis" in the 2011 Annual Report states "For many of our fair value estimates, including our estimates of the fair value of acquired intangible assets, we use the income approach...which uses valuation techniques to convert future amounts to a single present amount" (ATVI 2011 Annual Report). The company goes on to explain the variety of estimated which must be made when utilizing the income approach, which include "the potential future cash flows for the asset, liability or equity instrument being measured, the timing of receipt or payment of those future cash flows, the time value of money associated with the delayed receipt or payment of such cash flows, and the inherent risk associated with

the cash flows” (ATVI 2011 Annual Report). Because of these estimates, the income approach leaves a layer of subjectivity which must be accounted for when using the fair value approach. A small change in any one of these estimates may create a large discrepancy in the fair value of an asset, possibly affecting whether or not the asset is assumed to be impaired.

The absence of such risks as well as the universal nature of the historical cost method has made it the standard for GAAP accounting. However, the relevance of the fair value method for valuing certain assets should not be forgotten, as it often provides a beneficial second-opinion of the true value of an asset. This is especially true in the interactive entertainment industry, where volatile assets such as goodwill and intellectual property licenses make up the bulk of many companies’ balance sheet.

## **Section 1.8: Cash Flow Analysis**

ATVI’s cash flow statement gives much insight into its current operations and ongoing strategy as an organization. By examining the cash flows from operating, investing, and financing activities, a greater understanding of the company’s financial health may be gleaned, and one of its most useful assets, cash, may be accurately portrayed and even predicted for future periods.

### **Section 1.8.1: Operating Activities**

ATVI’s operating activities during the year ended December 31, 2012 provided the company with \$1,345 million, as opposed to only \$952 million a year earlier. Net income was \$1,149 million, leaving \$196 million in adjustments to reconcile it with net cash provided by operating activities. Of this amount, prominent figures included an increase in cash from a decrease in deferred revenues of \$153 million, the amortization and write-off of capitalized software development costs and intellectual property licenses of \$208 million, and software

development and intellectual property licenses decreasing cash flow by \$301 million. Digging deeper into these numbers, it may be observed that one of the most prominent positive adjustments, deferred revenues, is a recurring feature of the company's cash flow statement. This stems from the company's concentration on online and subscription-based games, whose sales price is not immediately recognized. ATVI's 2011 10-K explains, "We have determined that some of our game's online functionality represents an essential component of gameplay and as a result a more-than-inconsequential separate deliverable. As such, we are required to recognize the revenues of these game titles over the estimated service periods, which may range from a minimum of five months to a maximum of less than a year" (ATVI 2011 Annual Report). Considering this, the size of the deferred revenue adjustment should not be alarming, especially considering the current number (\$153 million) is far smaller than its value a year earlier (\$248 million). Furthermore, the large adjustments due to software development costs and intellectual property licenses are common in an industry centered on these activities.

Contrasting this, EA has a large adjustment for depreciation, amortization, and accretion of \$216 million and a much smaller adjustment for deferred revenue, \$43 million. This could be explained by EA's dearth of online-only, subscription-based games which are often the source of large deferred revenue amounts. It also holds far more PPE than ATVI (\$568 million vs \$141 million), explaining the more substantial depreciation charges.

**Operating and Non-Operating Activities: Income Statement**

<b>Operating</b>	<b>Non-Operating</b>
Product Sales	Restructuring
Subscription, Licensing and Other Revenues	Investment and Other Income
Cost of Sales-Product Costs	Income Tax Expense (Benefit)
Cost of Sales-Massively Multiplayer Online Role-Playing Game (MMORPG)	
Cost of Sales-Online Subscriptions	
Cost of Sales-Software Royalties and Amortization	
Cost of sales – Intellectual Property Licenses	
Product Development	
Sales and Marketing	
Impairment of Intangible Assets	
General and Administrative Costs	

**Operating and Non-Operating Items: Balance Sheet**

<b>Operating</b>	<b>Non-Operating</b>
Cash and cash equivalents	Short-term Investment
Accounts receivable	Long-term investments
Inventories	
Software development	
Intellectual property licenses	
Deferred income taxes, net	
Intangible assets, net	
Other current assets	
Software development	
Intellectual property licenses	
Property and equipment, net	
Deferred income taxes	
Other assets	
Intangible assets, net	
Trademarks and trade names	
Goodwill	
Accounts payable	
Deferred revenues	
Accrued expenses and other liabilities	
Deferred income taxes, net	
Other liabilities	

### **Section 1.8.2: Investing Activities**

The investing activities of ATVI are composed mainly of the buying and selling of available-for-sale investments. During 2012, these activities shows proceeds from the maturity of these investments of \$444 million and an outflow of cash of \$503 million from the purchase of other available-for-sale investments. In the same period of 2011, proceeds from these investments had been significantly more at \$740 million, but purchases had been more comparable, at \$417 million. Other items include \$73 million of capital expenditures (up from \$72 million a year earlier), and an increase in restricted cash of \$2 million (compared to a decrease of \$8 million a year earlier). As of December 31, 2012, ATVI had used \$124 million in investing activities. Ultimately, these numbers show us the company's relatively expensive investing habits, as its purchases of securities was almost half of its cash provided by operating activities in the same period, and 113 percent of the yield of its previous investments during the period. (Although this is not uncommon in the industry, as EA used \$468 million of cash in the same period for short-term investments). Unless these investments begin yielding higher returns or operating activities retain more cash, investing activity will certainly slow down in subsequent periods. This intensive investing may be the sign of a company reaching maturity in which it believes cash may better be utilized through investing in securities rather than new products.

### **Section 1.8.3: Financing Activities**

ATVI's financing activities are primarily made up of outflows stemming from a massive repurchase of common stock that the company undertook at the beginning of the year; "On February 2, 2012, our Board of Directors authorized a new stock repurchase program under which we may repurchase up to \$1 billion of our common stock, on terms and conditions to be

determined by the Company, during the period between April 1, 2012 and the earlier of March 31, 2013...”(ATVI June 30, 2012 10Q). As of December 31, 2012, the company had repurchased \$315 million of common stock, while also paying dividends of \$204 million. A similar stock repurchase program had been in effect a year prior, in which \$692 million of stock had been acquired by December 31, 2011 and \$194 million of dividends had been paid. In total, as of December 31, 2012, Activision Blizzard’s financing activities had used \$497 million, compared with \$808 million by December 31, 2011. Similarly, EA repurchased or retired \$471 million of common stock during 2012 but issued no dividends. These stock repurchase and dividend programs reflect strongly on the financial health of the ATVI, suggesting a growing stockpile of cash as well as confidence in the resoluteness of the company’s common stock price. The lack of any long-term debt financing, while lowering leverage, diminishes concerns of volatility stemming from market forces, and reinforces confidence in the company’s future prospects.

#### **Section 1.8.4: Life Cycle Observations**

It is possible to extrapolate a reasonable observation of a firm’s life cycle from cash flow analysis. This results in a more meaningful result than other forms of life cycle analysis, as “cash flow pattern proxy is better aligned with the functional form of firm profitability than competing classification schemes”.<sup>18</sup> To do this, operating, investing, and financing cash flows will be examined as a proxy to determine ATVI’s current life cycle.

Firstly, ATVI’s large, positive operating cash flow is consistent with firms in the growth or maturity phase. This is because “profit margins are maximized during increases in investment and efficiency” (Dickinson) such as those seen in the growth and maturity phases. The large

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<sup>18</sup> Dickinson, V., 2011, Cash Flow Patterns as a Proxy for Firm Life Cycle, *The Accounting Review*, Vol. 86, No. 6, pp 1969- 1994



increase seen between December 31, 2012 and a year earlier (\$1,345 million compared to \$952 million) suggest the firm is hitting its peak stage of growth and heading towards maturity.

Next, ATVI's investment outflow of \$124 million during 2012 point to the growth stage or possibly early maturity. During the growth stage, "Managerial optimism encourages firms to make early investments that deter competitors' entries into the market", and although investment is typically flat in maturity, "They (mature firms) continue to invest to maintain capital" (Dickinson). It is important to note that the past six years have seen varying results from investing cash flows, including four years of outflows (2007, 2009, 2010, 2012) and two of inflows (2008, 2011). This makes it more difficult to confidently classify ATVI, although the unusual circumstances of the cash received during the 2008 business combination should be considered an outlier.

Finally, ATVI has seen large negative outflows of cash from financing activities since 2009 because of large rounds of stock repurchase programs and dividend payments. These distributions of cash to stockholders fall in line with the financing actions of mature firms, as they "...either begin to service debt and distribute cash to shareholders because they have exhausted their positive net present value investment opportunities, or they overinvest in suboptimal projects that diminish their overall profitability" (Dickinson). Financial statement analysis seems to suggest that ATVI has opted for the former strategy, and plans to continue to do so in the near future, although it should be noted that these outflows have decreased steadily (\$1,053 million in 2010, \$808 million in 2011, and \$497 million in 2012).

Ultimately, based on analysis of cash flows from the past six years, ATVI seems to be acting in accordance with the actions of a mature, or late-growth firm. The company is enjoying record operating inflows, while still investing in available-for-sale investments and capital expenditures. Rather than stockpiling cash or expensing it for heavy growth, the company has

instead planned to return over \$1 billion to investors. While life cycle analysis is inherently speculative, primarily because “Firms are aggregations of multiple products, each with a distinct product life” (Dickinson), based on available evidence, it is reasonable to conclude that ATVI may currently rest in the mature/late growth stage.

## **Section 1.9: Basic Financial Statement Ratio Analysis**

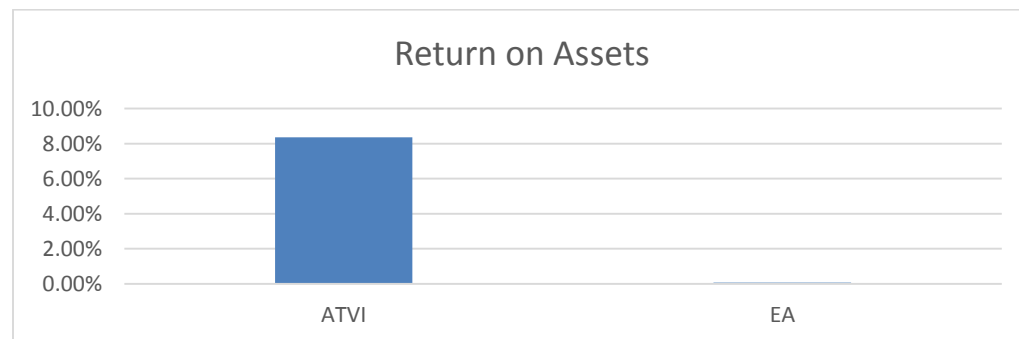
A company’s financial statements can help provide a broad interpretation of its financial position and operating success, but in order to gain a clearer picture of ATVI’s operating effectiveness, several key financial ratios must be calculated and analyzed. These include the return on assets (ROA) and return on equity (ROE) ratios.

### **Section 1.9.1: Return on Assets**

The return on assets ratio (ROA) provides insight into how successfully the company is using its assets to generate net income. It is calculated by dividing net income into total assets. A low percentage indicates that assets are not being used efficiently to generate earnings, and the investments made to acquire assets are not providing suitable earning power. Conversely, a high percentage suggests that management is using assets to their fullest and therefore create more earnings with less investment. It should also be noted that a suitable ratio differs across industries, so ATVI’s ROA will be judged against that of its close competitors in the electronic entertainment industry.

ATVI’s ROA as of December 31, 2012 (ttm) is 8.36 percent, compared to EA’s .073 percent and THQ’s –8.64 percent. Compared to these competitors, ATVI’s management is using the company’s assets very effectively. One reason for the competitors’ low and even negative ROAs could be the amount of goodwill, software development, and licenses these companies must hold. Net income in the industry is driven almost exclusively by “hit” game titles being

released, and when the industry has a relatively dry season (as it has in the past year), the assets generate little revenue. ATVI was most-likely spared from this by the continuing popularity of its key franchises and their new iterations which were released in the past year, such as *Diablo 3* and *Call of Duty: Modern Warfare 3*. It is quite possible that EA and THQ's ROAs will improve once new hit titles are released this year.

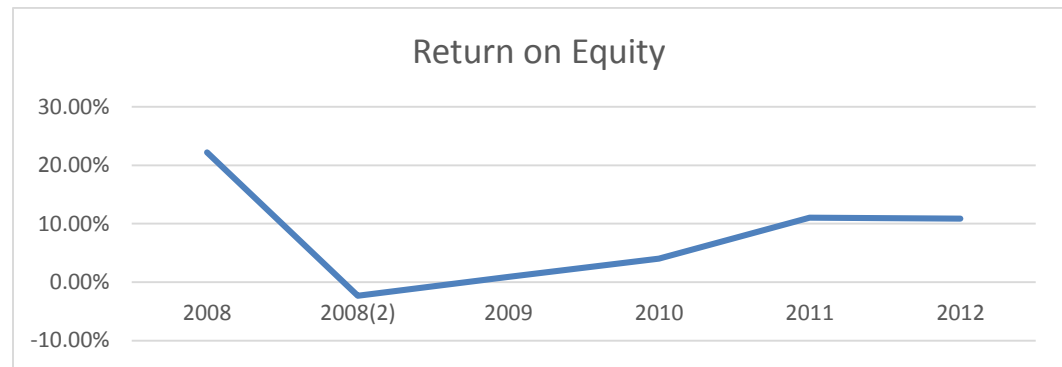


### Section 1.9.2: Return on Equity

Similar to ROA, the Return on Equity ratio (ROE) sheds light onto how much the company earns relative to the money provided by investors. It is calculated by dividing net income by average shareholder equity. A low percentage suggests that management is not using shareholder-invested capital to its fullest, while a high percentage shows the value created by shareholder equity. Once again, ATVI's ROE will be compared against that of other companies in the industry to ensure a relevant comparison.

ATVI's ROE as of December 31, 2012 (ttm) is 10.54 percent, while EA's is 3.03 percent and THQ's falls at -248.80 percent. ATVI's ROE is significant compared to that of EA, proving that it provides more value for its shareholders than EA. This is impressive considering that ATVI is financed strictly through equity, unlike EA which reported \$539 million in long-term debt as of December 31, 2012. THQ's shockingly low ROE stems from its significant shareholder deficit and

net losses reported within the last year, and will therefore be treated as an outlier and not considered in this comparison.



### **Section 1.9.3: Profitability Conclusion**

Drawing from the insights obtained from the ROA and ROE analysis for ATVI, it can be concluded that the company's performance from a profitability and efficiency standpoint is exceptional, especially when compared with its industry competitors. The company efficiently and effectively uses its assets to produce sales and turns shareholder-invested capital into income far better than its closest competitors in the interactive entertainment industry. This is most-likely caused by the ATVI's steady library of popular titles, with more on the horizon. A consistent lineup of quality games is the most important competitive advantage a company can possess in the industry, and has proven to be a boon for the company's financial health amid turbulent times in the interactive entertainment sector. These results are consistent with ATVI's business strategy "to continue to be a worldwide leader in the development, publishing, and distribution of quality interactive entertainment software, online content and services that deliver a highly satisfying entertainment experience" (ATVI corporate website).

## **Section 1.10: Disclosure Considerations**

### **Section 1.10.1: Overall Disclosure Quality**

Based on impressions from an initial analysis of ATVI's yearly and quarterly SEC filings as well as their corporate website, it is fair to say that the company provides an adequate amount of disclosure of its business practices and inner workings to interested parties. Firstly, the website provides detailed information on the company's leadership (complete with brief, individual biographies for senior corporate management), along with other key information such as current and past SEC filings, current and previous stock prices, a product release calendar, and recent presentations and earnings reports. Almost all relevant information which may be expected from a corporate website is present, and is comparable to competitors' sites such as EA and THQ.

Secondly, ATVI's SEC filings provide a wealth of information regarding the company's operations. Most notable, (and surprising), is a comprehensive disclosure on the company's reliance on several key "hit" titles for revenue generation. The company goes into impressive detail in the "Risk Factors" section of their February 28, 2012 10-K on the nature of the interactive entertainment industry and its emphasis on the continuous release of successful games as well as the creation of new blockbuster franchises. This potential threat is universal in the videogame industry, however, and is far from being specific to ATVI. Nevertheless, it is important that the organization reveal this factor to investors, and laudable that they chose to do so in great detail. Furthermore, the company provides detailed supplementary information to the four financial statements in the "Notes to Consolidated Financial Statements" section, disclosing specific accounting practices in areas such as revenue recognition (where a large portion is deferred due to the company's many subscription services), and goodwill, (which

makes up a large portion of the entity's balance sheet). Overall, ATVI's disclosure quality is excellent and provides stakeholders with ample information on the company's practices and operations.

#### **Section 1.10.2: Threats From Disclosure Decisions**

When ATVI decides how much or how little to disclose in its SEC filings and other publicly released documents, it must consider the specific benefits and threats of doing so. On one hand, the investing public requires accurate and timely financial information from the company to make resource allocation decisions, most notably, whether or not to invest in the company. If ATVI discloses too little information, it is likely to alienate current and potential equity investors, or even face SEC intervention. However, by disclosing too much information, particularly in the notes to financial statements or business strategy sections, the entity risks exposing potential weaknesses or giving away strategic information to competitors. This risk is especially potent in the interactive entertainment industry, where fresh, quality game ideas and subsequent releases are the cornerstones of a company's success. However, all of ATVI's hallmark franchises are well-protected behind intellectual property rights and are exposed to little to no risk of successful imitation due to the longstanding history and impressive following of its largest series, *Call of Duty*, *World of Warcraft*, *Starcraft*, and *Diablo*. Ultimately, ATVI manages to disclose a large amount of relevant information to interested parties, thereby satisfying investors as well as the SEC, while providing little to no benefit to competitors who might investigate the provided information.

## **Section 1.11: Board of Directors Analysis**

ATVI's Board of Directors is made up of eleven members from various backgrounds and specialties. It is important to analyze this roster member by member in order to understand the unique competencies these individuals bring and how they may affect the company's governance and competitiveness.

### **Section 1.11.1: Phillipe G. H. Capron, *Chairman***

Mr. Capron, originally the CFO of Vivendi, has served as a director of ATVI since the July 2008 merger and was elected Chairman of the Board and chairperson of the Compensation Committee in July 2012. Mr. Capron brings a wealth of current and previous leadership experience from a variety of board positions in industries including steel (Arcelor), television (Canal+, NBC Universal), telecommunications (Maroc Telecom, SFR, GVT Holdings), veterinary supplies (Group Virbac), and credit risk management (Tinubu Square). While some of these positions hold little relevance to the videogame industry to which ATVI belongs, his experience in television may be well-adapted to the hit-driven nature of interactive entertainment, and his time with telecommunications may prove valuable as the videogame industry moves further towards complete online-integration.

### **Section 1.11.2: Robert J. Corti, *Director***

Mr. Corti has held a director position at ATVI since December 2003 and currently serves as chairperson of the Audit Committee. He worked for Avon Products for 25 years, eventually holding positions as CFO and executive vice president, both of which he retired from between

2005-2006. Mr. Corti's background in tax and his designation as a CPA make him a strong leader for the Audit Committee as well as the financial well-being of Activision-Blizzard as a whole.

**Section 1.11.3: Frederic R. Crepin, *Director***

Mr. Crepin has served as a director at ATVI since the 2008 merger, and also serves as the chairperson of the Nominating and Corporate Governance Committee. He has held the position of senior vice president and head of the legal department at Vivendi since August 2005, and brings with him legal experience from several law firms in both New York and Paris, where he is a member of the bar. Mr. Crepin's legal expertise makes him a valuable asset to a board made up primarily of members from financial backgrounds.

**Section 1.11.4: Lucian Grainge, *Director***

Mr. Grainge has held his position on ATVI's board since March 2011. He also serves as Chairman and CEO of Universal Music Group, a subsidiary of Vivendi. While the music industry is in many ways dissimilar to the videogame industry, the hit-driven nature of both industries, as well as an enlarging focus on digital distribution, keeps his experience relevant.

**Section 1.11.5: Brian G. Kelly, *Co-Chairman***

Mr. Kelly has served under various positions at Activision Blizzard since 1991, and has served on the board since July 1995. He is an ideal board member and Co-Chairman due to his long history with the company during its early years and the development of its key franchises.



#### **Section 1.11.6: Robert A. Kotick, *Director, President and CEO***

Mr. Kotick has been a director and CEO of Activision since 1991, and became CEO of Activision Blizzard following its 2008 merger. Mr. Kotick holds positions on the boards of several other companies and organizations including The Coca-Cola Company, the Los Angeles County Museum of Art, and the Tony Hawk Foundation. Mr. Kotick has a long and storied history in the interactive entertainment industry, dropping out of college to pursue entrepreneurial interests including attempting to create the first 16 bit videogame console. He continues to drive innovation in the industry, launching an Independent Games Competition with a \$500,000 prize awarded to the winning small developer. This commitment to the further development of interactive entertainment, as well as his history in the industry makes him a strong leader for the world's largest videogame software publisher.

#### **Section 1.11.7: Robert J. Morgado, *Director***

Mr. Morgado has been a director on ATVI's board since February 1997, previously serving as chairman and CEO of Warner Music Group. He is also chairman of Maroley Media Group, an entertainment investment company he started in 1995.<sup>19</sup> This gives him a strong background and understanding of the forces driving not just the music or interactive entertainment industries, but media as a whole.

#### **Section 1.11.8: Richard Sarnoff, *Director***

Mr. Sarnoff has held a position on ATVI's board since August 2005. He currently serves as a senior advisor at Kohlberg Kravis Roberts & Co., a private equity firm. Mr. Sarnoff has held a wealth of other positions including president of Bertelsmann Digital Media Investments,

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<sup>19</sup> <http://www.forbes.com/profile/robert-morgado/>

executive vice president and CFO of Random House, and Director of the Princeton Review.

These varied positions in the entertainment, publishing, and private equity industries make him a strong board-member as ATVI continues to expand and purchase previously independent developers.

**Section 1.11.9: Regis Turrini, *Director***

Mr. Turrini has served as a director at ATVI since June 2009. He has previously held several positions at Vivendi and its subsidiaries including executive vice president of mergers and acquisitions at Vivendi, chairman and CEO of Vivendi Telecom International, and his current position as senior executive vice president of strategy and development at Vivendi. His experience in mergers and acquisitions make him an especially valuable asset in ATVI's post-merger years and as the company executes smaller mergers with independent developers, as mentioned previously.

## Ch.2

### Section 2.1: Ratio Analysis

#### Section 2.1.1: State and Federal Tax rate

The statutory state and federal tax rates for the past six years are as follows (All data from 2012 ATVI 10-K):

Tax Rate	2007	2008	2009	2010	2011	2012
Federal	35%	-35%	-35%	35%	35%	35%
State (net of federal benefit)	4.1%	-3%	-219%	6%	1%	2%

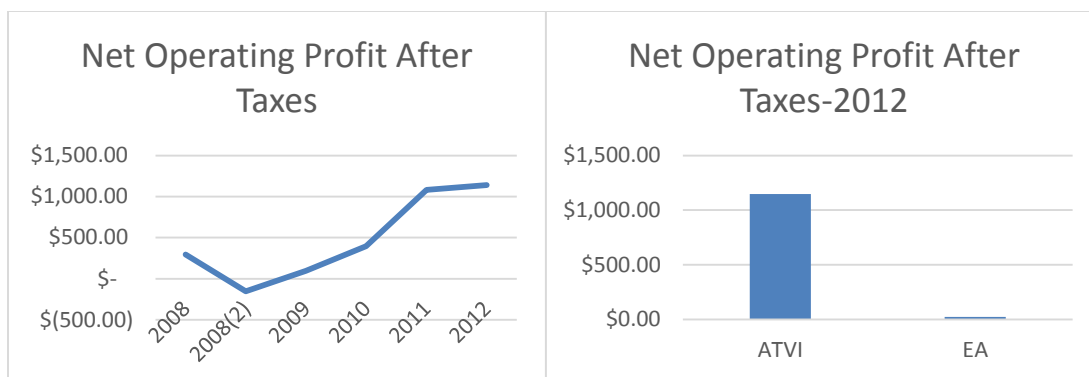
It should be noted that ATVI received an income tax benefit in the years 2008 and 2009 due to a net operating loss. This was primarily caused by a \$132 million federal net operating loss allocated to Vivendi Games following the settlement of a federal income tax audit with the IRS involving Vivendi Holding I Corp, of which Vivendi Games was previously a member. ATVI filed an amended tax return for its December 31, 2008 tax year, resulting in a one-time tax benefit of \$46 million.

#### Section 2.1.2: Net Operating Profit After Taxes

Net Operating Profit After Taxes, or NOPAT, represents the income from a company's operating activities after taking taxes into account. This is a powerful tool for analyzing a leveraged company, as it does not take into account tax savings by using debt. ATVI's Net Operating Profit After Taxes, or NOPAT, has seen several drastic changes in the past six years.

Starting in 2006, NOPAT was \$11.27 million, followed by a steady increase to \$49.11 million in 2007, before a significant uptake in pre-merger 2008 to \$293.63 million. This was primarily due to a jump in product sales revenue, from \$1,513.01 million in 2007, to \$2,898.14 million in 2008. Interestingly, post-merger 2008 NOPAT falls to a loss of \$153 million after tax savings of \$187 million; a result of restructuring charges of \$93 million and upticks in costs of sale for MMORPG, intellectual property licenses, and product development. These may reasonably be associated with the merger with Activision which took place during this time period, adding the cost of maintaining its popular *Call of Duty* and *Guitar Hero* franchises and the development of its upcoming releases such as *Starcraft 2*, *Diablo 3*, and *World of Warcraft: Wrath of the Lich King*. Following this, NOPAT jumped to \$95 million in 2009, although only after a tax loss savings of \$121 million resulting from an operating loss of \$26 million.

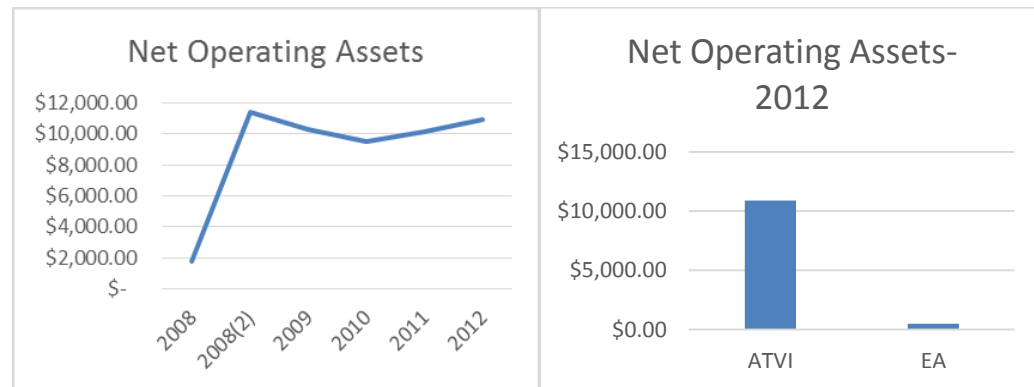
However, ATVI's post-merger prospects became significantly stronger in 2010, as NOPAT jumped to \$395 million, an increase of 315 percent, before surging to \$1,082 million in 2011 and \$1,146 million in 2012. This may be a result of the release of the highly anticipated *Call of Duty: Modern Warfare 3* in 2011, the best-selling game as of its release, (which was only displaced by *Call of Duty: Black Ops 2* in 2012) as well as increased development of synergies between the newly-combined companies. Comparatively, EA had NOPAT of only \$22.75 million in 2012, stemming from huge operating expenses such as R&D (\$1,180 million) and marketing (\$883 million). These drastic differences showcase the strong operating efficiency of ATVI. Only time will tell if EA's massive R&D and sales expenses translate into higher sales down the road, and whether such a strategy is sustainable.



### Section 2.1.3: Net Operating Assets

Net Operating Assets, or NOA, is equal to operating assets minus operating liabilities on a company's balance sheet. This metric is preferable to total assets, as operating assets and liabilities are linked to a company's ongoing operations, and thus more relevant when analyzing a company's performance. This figure allows the user to assess a stronger measure of the company's value by isolating operating from financing items. ATVI's Net Operating Assets, or NOA, has experienced similar upswings in the past six years as NOPAT, although at drastically different paces. NOA in 2006 was \$634.96 million, before enjoying a modest rise to \$841.09 million in 2007. Following this, NOA rose to \$1,803.72 million in pre-merger 2008, an almost 115 percent increase from a year prior. ATVI enjoyed an even greater gain following the 2008 merger, where NOA climbed to \$11,405 million, a 532 percent increase, as per expectations of such a prominent merger. The next three years, between 2009 and 2012, saw NOA hover between \$10,893 million and \$9,484 million, and was far outpaced by NOPAT growth during the same period, resulting in strong RNOA calculations as detailed in the next section.

Once again, EA's metrics lag far behind ATVI, with a 2012 NOA of only \$489 million, a result of a significantly smaller cash pile (\$1,293 million vs. \$3,959 million) and comparable liability make-up. While still relatively liquid, compared to ATVI, EA's balance sheet looks weak.

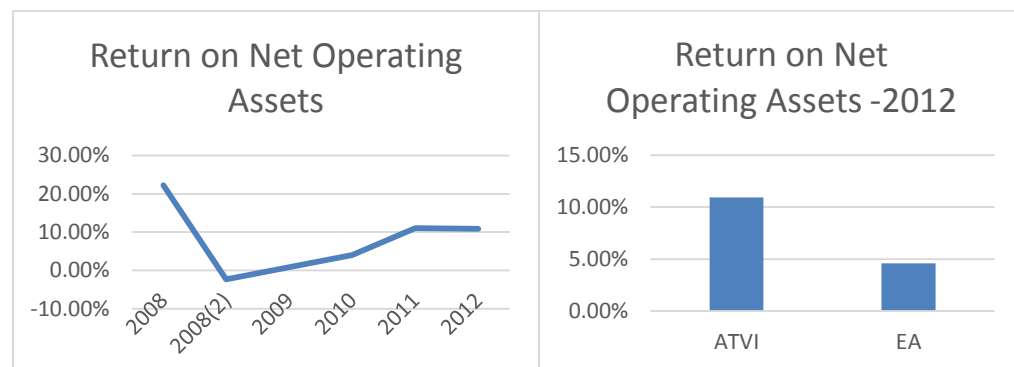


#### Section 2.1.4: Return on Net Operating Assets

Combining our previous two metrics, NOPAT and NOA, ATVI's Return on Net Operating Assets, or RNOA, may be measured throughout the past six years. This determines how much operating profit the company earns for each dollar of net operating assets, and is thus more relevant when measuring a company's ongoing operational efficiency than ROA, which factors in non-operating assets as well. RNOA was rather modest in 2006, at 1.87 percent, followed by a respectable increase in 2007 to 6.65 percent. Pre-merger 2008 saw the largest jump in RNOA, to 22.20 percent. This increase resulted from a 245 percent increase in NOPAT outpacing a 114 percent increase in NOA, as detailed above. Following the growth and decline pattern in NOPAT and NOA, RNOA fell to -2.32 percent immediately following the 2008 merger, as NOA increased by over 500 percent and NOPAT fell into negative territory. However, the next few years saw a steady increase in NOPAT, peaking in 2011 with RNOA at a healthy 11.04 percent before regressing slightly to 10.94 percent. These increases up to 2011 may be attributed to stronger sales in the years following the merger, culminating in 2011's 170 percent surge in NOPAT to

\$1,082 million as the newest iterations of the studios' hottest titles hit shelves. While NOPAT again increased in 2012 to \$1,146 million (6 percent), NOA jumped 8 percent resulting in a marginally-lower RNOA.

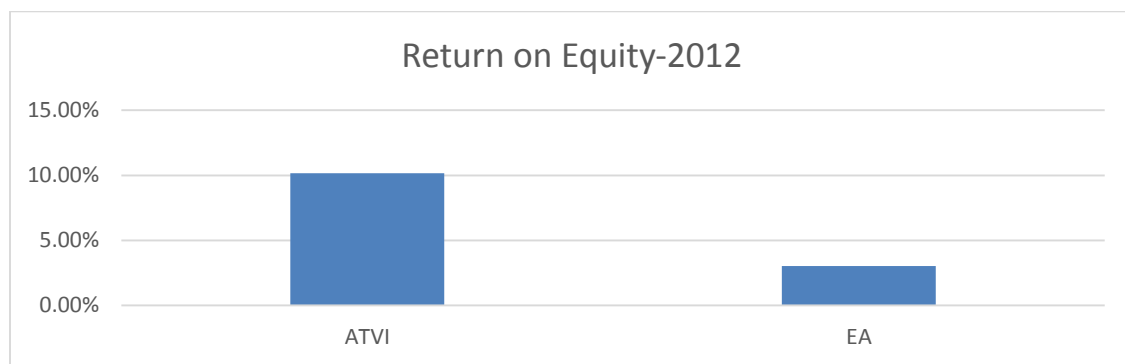
Even with a significantly smaller NOA base, EA's minuscule NOPAT resulted in a RNOA of only 4.6 percent in 2012, further showcasing the operating efficiency of ATVI, even with a much larger base of operating assets. This has shown EA operates with relatively little slack between operating assets and liabilities, and has trouble generating suitable sales on those same assets.



### Section 2.1.5: Return On Equity

ATVI's Return on Equity, or ROE, is equivalent to the sum of a company's operating return (or RNOA) and its non-operating return (see below). ROE is often thought of as measuring how efficiently a company is using equity contributed by shareholders, and thus moves beyond RNOA to measure the return on a company's total resources (beyond just operating assets). ROE for ATVI follows closely to its RNOA, suggesting a large majority of the company's returns are derived from operating activities. ROE ended 2006 at 3.60 percent, with RNOA at 1.87 percent, a 1.73 percent difference, and the largest divide between the two figures in the five years examined. Later years saw ROE rise to 20.53 percent in pre-merger 2008, by far its largest register in the five years, and keeping relatively close to an RNOA of 22.20 percent. Remaining in

lock-step with RNOA, ROE plummeted to -3.96 percent in post-merger 2008, before sitting comfortably at 10.53 percent as of 2012. Similar to RNOA, ATVI's ROE over the past five years point to burgeoning synergies following the merger, although whether these benefits may be maintained over the long-term remains to be seen. Ultimately, these numbers suggest the company's profitability is strengthening, as its closest competitor, EA, is faltering with a 2012 ROE of 3 percent.

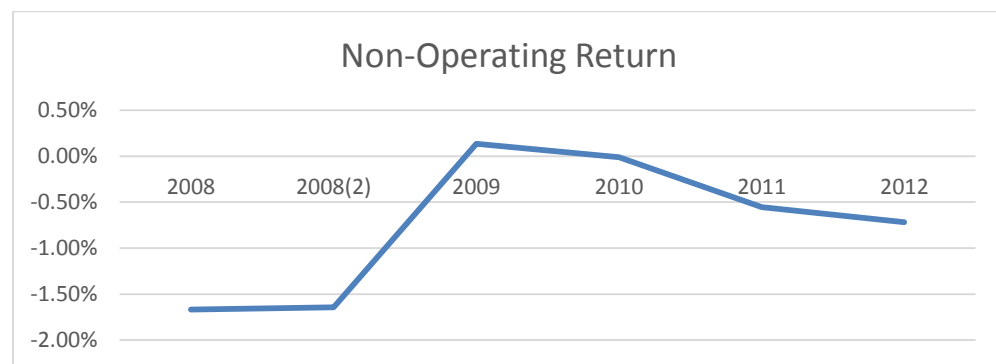


#### Section 2.1.6: Non-Operating Return

Non-Operating Return (NOR) is the second part of the ROE calculation, with RNOA being the first. NOR may be calculated as Financial Leverage (FLEV) multiplied by the spread between RNOA and Net Non-Operating Expense Percent (NNEP). Overall, this calculation measures the extent to which the company is using debt to increase its ROE. This return is limited to the extent that a greater return can be extracted from debt than is paid out as interest, and is thus less-reliable than equity financing. ATVI's Non-Operating Return over five years varies wildly, often swinging between negative and positive values. NOR for 2007 was -.15 percent before dropping further to -1.67 percent in pre-merger 2008 and -1.65 percent in post-merger 2008. The year 2009 saw NOR become positive at .14 percent before moving into negative territory once more to -.01 percent, -.56 percent and -.76 percent in 2010, 2011, and 2012 respectively.



While these numbers may seem strange at first glance, a negative NOR is actually common for tech companies that hold marketable securities on their balance sheet for liquidity purposes. ATVI is among these companies, as its short and long-term investments become greater in the latter part of the five-year period. Essentially, the company is sacrificing some return for greater liquidity; not an uncommon strategy in its sector as EA shows with a similar negative 2012 NOR.



## Section 2.2: RNOA Disaggregation

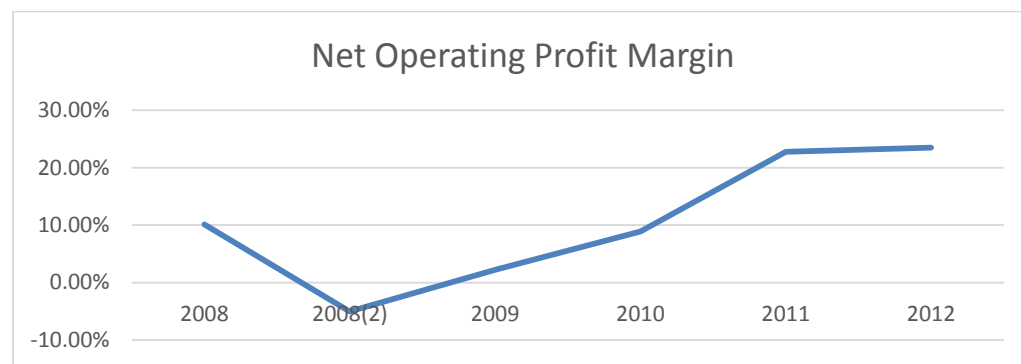
RNOA may be broken down into its two components, Net Operating Profit Margin (NOPM) and Net Operating Asset Turnover (NOA). This disaggregation reveals further insights into a company's performance and the drivers behind RNOA.

### Section 2.2.1: Net Operating Profit Margin

Net Operating Profit Margin reveals how much of each sales dollar is transformed into operating profit. Drivers behind this metric include gross profit and operating expenses. Its calculation involves dividing NOPAT by revenue.

Similar to previous metrics, ATVI's NOPM over a five-year period varies broadly, sometimes even dipping into negative territory. NOPM in 2007 was 3.25 percent before advancing to 10.13 percent in pre-merger 2008. Following the 2008 merger, NOPM falls to -5.06

percent (stemming from a negative NOPAT that period). The next few years show a steady rise in NOPM, from 2.22 percent in 2009 to 23.52 percent in 2012. These numbers reflect strong NOPAT performance in later years, particularly in 2011 as NOPAT jumped from \$395 million to \$1,082 million while revenue advanced only \$308 million. Examining the income statement, it may be inferred that this dramatic discrepancy is due to decreasing operating expenses in 2011, most prominently the absence of impairments of intangibles.

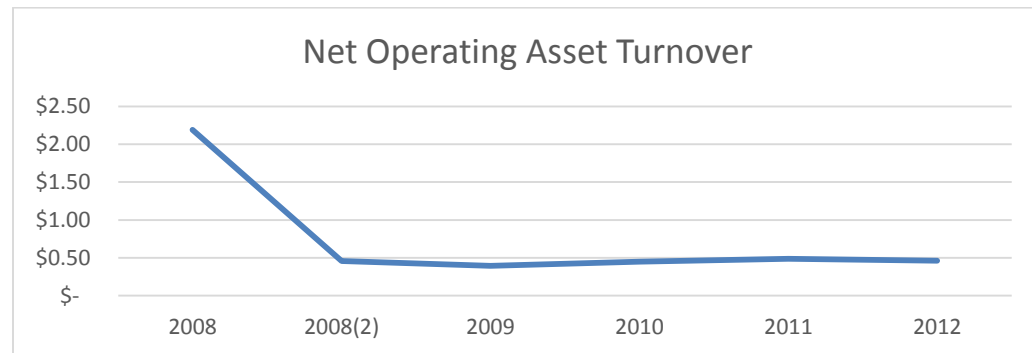


### Section 2.2.2: Net Operating Asset Turnover

Net Operating Asset Turnover, or NOAT, measures the efficiency of a company's operating assets in generating sales. Drivers include revenue, and the overall management of NOA levels, which may be improved by activities such as increased inventory turnover and faster collection of receivables. NOAT is calculated by dividing revenue by average NOA.

ATVI's NOAT over the five-year measured period reveals interesting changes in the company's balance sheet and income statement. NOAT in 2007 was 2.05 which moved higher to 2.19 in pre-merger 2008 before plummeting to 0.46 in post-merger 2008 and remained close to this level through 2012. Upon examination of the underlying financials, it may be seen that ATVI's revenues between pre and post-merger 2008 increased only 4.4 percent while NOA shot up 532 percent. Referencing the balance sheet, Additional Paid-In Capital jumped from \$1,148

million to \$12,170 million between these periods, before falling to \$9,616 in 2011. This rise may be attributed to the accounting treatment of the assets received during the merger, and dramatically undercuts NOAT in these years.



## Section 2.3: NOR Disaggregation

Non-Operating Return (NOR) may be broken down into two separate components: Financial Leverage (FLEV) and the spread between RNOA and Net Non-Operating Expense Percent (NNEP). This is referred to simply as Spread. Studying these two components may yield a stronger understanding of the drivers behind NOR, and consequentially, ROE.

### Section 2.3.1: FLEV

The calculation of FLEV consists of dividing average Net Non-Operating Obligations (NNO) by Average Equity. This measures the relative use of debt in an organization's capital structure. ATVI's FLEV over the five-year period remains negative due to the company's lack of Non-Operating Obligations. FLEV in 2007 is -0.43 which then rises to -0.086 in pre-merger 2008 and -0.018 in post-merger 2008. It then moves to -0.045 in 2009 and -0.069 before becoming fairly constant at -0.036 in 2011. The reason for this rise is a burst of equity following the merger which outpaces the gains in NNO.

### **Section 2.3.2: Spread**

To calculate Spread, it is necessary to first calculate Net Non-Operating Expense to find the Net Non-Operating Expense Percent (NNEP). Afterwards, the difference between RNOA and NNEP is then taken to find Spread, or the difference between after-tax operating return and after-tax cost of debt. Examining ATVI's Spread over the five years yields curious results. Spread in 2007 is 0.22 percent while pre-merger 2008 is -13.35 percent and post-merger 2008 is -40 percent. Figures then move towards positive territory, advancing to -2.72 percent in 2009, 0.80 percent in 2010 and 10.24 percent in 2011. The percentage then drops slightly to 9.22 percent in 2012. From these data, it may be inferred that ROE is less than RNOA in later years when Spread is positive and FLEV is negative. Essentially, because of ATVI's investment in marketable securities, it is sacrificing ROE for increased liquidity. However, in periods such as pre and post-merger 2008 and 2009 when Spread is negative, the ROE will be greater than RNOA. This suggests that the marketable securities are actually yielding more than the company's operating assets would on their own. This strange phenomenon may be the result of the low profits or losses in these years coupled with the increase in operating assets during the merger.

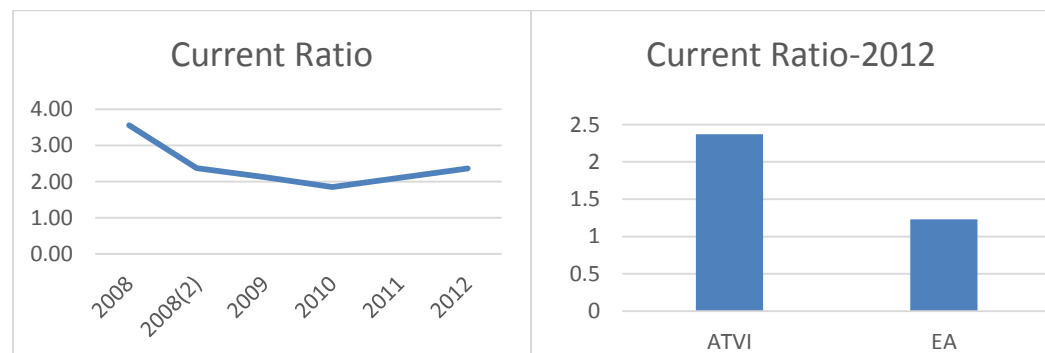
## **Section 2.4: Liquidity and Solvency Ratios**

### **Section 2.4.1: Liquidity Ratios**

Liquidity measures a company's ability to pay off short term obligations. Two primary ratios to measure liquidity are the current ratio and the quick ratio.

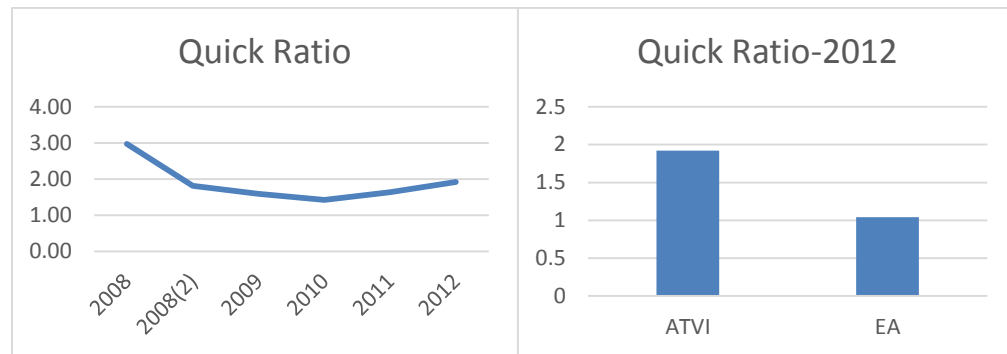
The current ratio is calculated by dividing current assets by current liabilities. It measures a company's ability to pay off its current obligations with its current resources such as cash and short term investments. Generally, a ratio at 1 or above is favorable, but this may depend on the nature of the business. ATVI's current ratio in 2007 was 4.1, which fell to 3.6 in

pre-merger 2008 and 2.4 in post-merger 2008. The ratio hovered around this amount through 2012, apart from a low of 1.9 in 2010, but still remaining more liquid than EA which possessed a 2012 current ratio of 1.23. Ostensibly, ATVI's current assets are more than enough to cover its current liabilities, possibly even indicating an inefficiency in the company's accounts receivable collection and inventory distribution. However, examining the balance sheet, it's apparent that the company's large holdings of short-term investments account for the large, 4.1 current ratio. This allows the company to remain liquid, but may dampen returns such as RNOA, as seen in previous sections. In later years, short-term investments fall, before rising to a high of \$696 million in 2010. A large amount of deferred income taxes in this year (\$640 million) is also notable, but the current ratio is ultimately dampened by a sizeable deferred revenue balance (\$1,726 million).



The quick ratio is a variation of the current ratio that measures assets that may be converted to cash in a short period of time. These include cash, short term investments, and accounts receivable. Notable exclusions are inventory and deferred income taxes. ATVI's quick ratio in 2007 was 3.2 before retreating to 3 in pre-merger 2008 and 1.8 in post-merger 2008. It then hovered near this amount through 2012. Similar to the current ratio, the reason for this fall in post-merger years was the inception of a larger deferred revenue balance. This especially affected the quick ratio, as it does not take into account the substantial deferred income tax

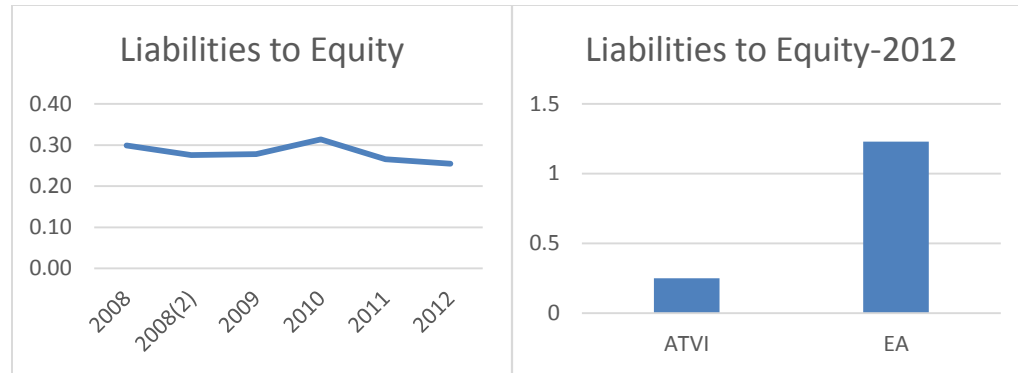
balance in current assets. Regardless, ATVI shows solid liquidity even using the more conservative quick ratio, particularly when compared to EA's 2012 quick ratio of 1.04.



#### Section 2.4.2: Solvency Ratios

Solvency measures the ability of a company to pay its long-term obligations, including periodic interest payments and principle payments on debt. Two common solvency ratios are the Liabilities-to-Equity ratio and Times Interest Earned.

The Liabilities-to-Equity ratio measures the portion of financing which comes from debt as compared to equity. It is calculated by dividing total liabilities by stockholders' equity. As stated previously, ATVI has little or no long-term debt, and therefore this ratio is expected to be very small. When calculated, the ratio is 0.27 in 2007 and hits a peak of 0.31 in 2010. This confirms the previous observation, and shows that ATVI is almost entirely equity financed. It should be noted that what liabilities are included in the calculation are primarily accounts payable and deferred revenue with no long-term debt. In comparison, EA has a 2012 ratio of 1.23 due to \$539 million in debt, large deferred revenue accounts, very little paid-in capital compared to ATVI (\$2,359 million vs \$9,450 million), and a retained earnings deficit of \$77 million.



The Times Interest Earned ratio measures the amount of operating income available to pay interest expense on debt. A strong ratio indicates little risk of default. However, ATVI holds no long-term debt and pays no interest. Therefore, this ratio is not useful in this analysis.

## Section 2.5: Vertical and Horizontal Analysis

Vertical analysis involves presenting financial statements in ratio form, expressing sub-categories as a percentage of aggregate values. Horizontal analysis compares these data across a period of time. The result is a common-size financial statement which facilitates cross-company comparisons. Examining the vertical and horizontal analyses, there are several patterns and trends which may be identified on both the balance sheet and income statement.

### Section 2.5.1: Common-Size Balance Sheet Trends

The first pattern which may be identified in the balance sheet analysis is the shifting importance of goodwill before and after the 2008 merger. Pre-merger 2008 goodwill stands at 11.03 percent before moving dramatically upwards to 49.16 percent immediately following the event. This primarily replaces short-term investments, long-term investments, cash, and intellectual property licenses, all of which fall significantly as a percentage of total assets. This shift may be expected, as many mergers create large amounts of goodwill to express the premium paid for a company.

On the liabilities and shareholders' equity side, a sizable shift towards deferred revenues, which don't exist in pre-merger 2008 to becoming 12 percent of total liabilities and stockholders' equity in 2012, may be observed. This deemphasizes the importance of accrued expense and deferred income taxes. Like the appearance of goodwill, this shift is likely caused by the merger and a large amount of deferred subscription revenue stemming from Blizzard's MMORPG, *World of Warcraft*.

A final, and most dramatic change seen in the analysis is dominance of additional paid-in capital (APIC) following the 2008 merger. In pre-merger 2008, APIC stood at 45 percent before rocketing to a peak of 92 percent by 2010. This cut into retained earnings as a percentage of liabilities and stockholders' equity, which plummeted from 30 percent in pre-merger 2008 to 0.43 percent by 2010. A probable cause of this change was the merger and the issuance of additional common stock which accompanied it.

### **Section 2.5.2: Common-Size Income Statement Trends**

The income statement analysis reveals several observable patterns over the five-year period. First, there is a gradual deemphasizing of product costs, falling from 53 percent in 2007 to only 23 percent by 2012. As this retreats online subscription costs accelerate from non-existence in pre-merger 2008 to 5.42 percent by 2012. Accordingly, product development costs also pick-up and fill in the void created by falling product costs. According to the post-merger 2008 10-K, this was due to "expenses from Activision, Inc. of approximately \$187 million being included from the date of the Business Combination, but not for prior periods" and "costs of canceled titles totaled \$71 million".<sup>20</sup>

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<sup>20</sup> Activision-Blizzard 2008 10-K "Product Development Costs"



A second area of interest is the profitability margin during the period. Pre-merger 2008 saw net income of 12 percent of total sales. This fell to a loss during post-merger 2008, before recovering to 2.64 percent in 2009 and steadily increasing to 24 percent by 2012. This may be due to large product development charges during this time as the business merged their operations and had not yet eliminated redundancies.

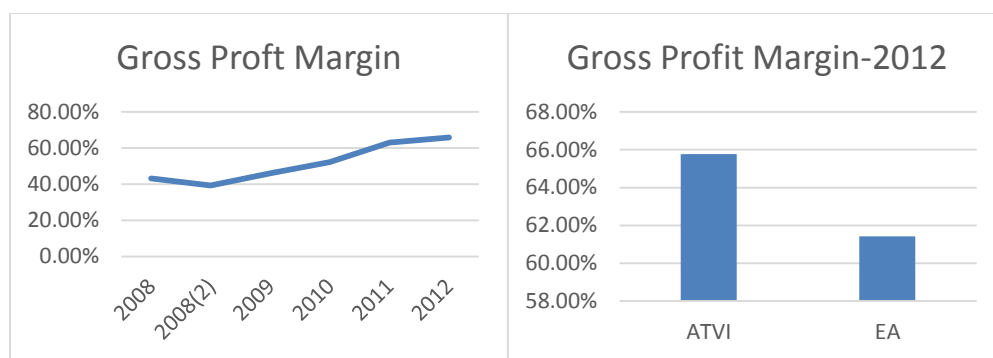
## **Section 2.6: Selected Operating Margins**

Operating margins reveal telling insights into a company's core operations and facilitate comparisons with competitors. Some useful ratios include Gross Profit/Sales, SG&A/Sales, and R&D/Sales.

### **Section 2.6.1: Gross Profit/Sales**

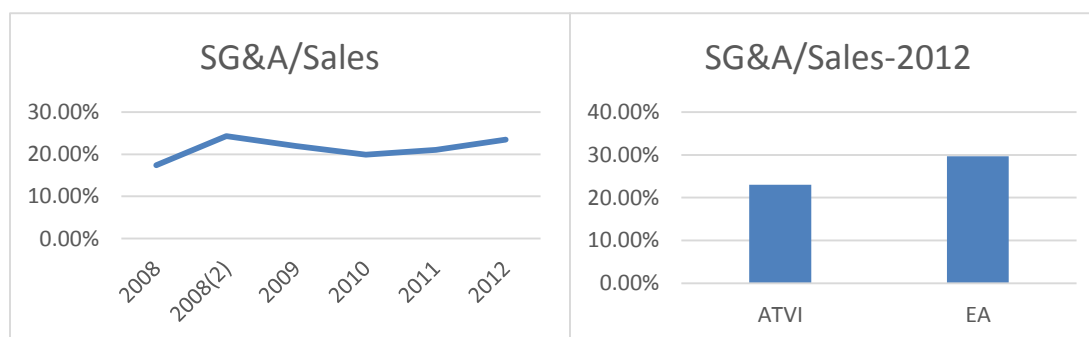
The Gross Profit Margin (GPM) measures the amount of gross profit realized for each dollar of sales. This is affected most prominently by selling price and the cost of manufacturing. GPM for ATVI in the past five years shows a steady improvement moving towards 2012. GPM in 2007 was 35.36 percent which rose to 43.22 percent in pre-merger 2008 before dipping to 39.23 percent in post-merger 2008. Following this was an increase leading to 65.77 percent in 2012. This improvement is indicative of sales outpacing product costs following the merger and onward. Essentially, ATVI is making more sales out of each dollar of product costs.

This is one ratio in which ATVI and EA's metrics remain relatively close, with EA's 2012 GPM reporting at 61.43 percent. While this is still lower than ATVI's (65.77 percent), it showcases the similarities in COGS between the two companies and focuses attention on the more disparate operating expenses.



## Section 2.6.2: SG&A/Sales

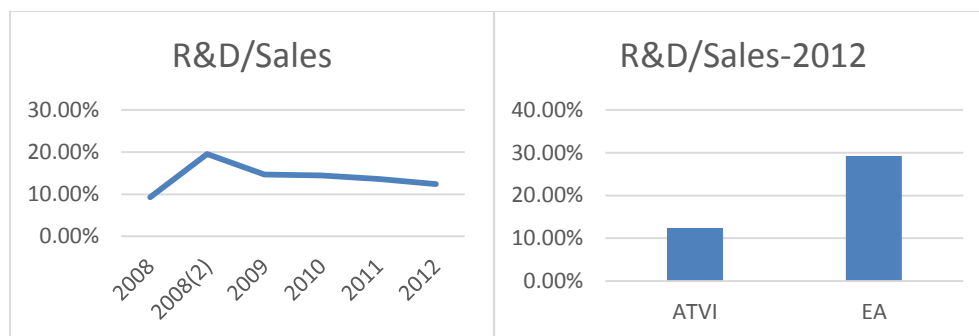
Selling, General, and Administrative Expenses/Sales represents the amount of cash flow used on broad selling and administrative expenses to achieve sales. These expenses usually relate to an entire company's operations, rather than a specific product or service. For ATVI, SG&A represents a significant expense; second only to product development costs. In 2007, SG&A/Sales was 22 percent, before hitting a five-year low of 17 percent in pre-merger 2008. A high was hit in post-merger 2008 of 24 percent before leveling out in the low 20s for the remainder of the period. This seems fairly standard for an industry based primarily off of hit titles which must be heavily marketed leading up to their release to stimulate sales and demand. As long as sales for popular titles remain strong, such heavy SG&A spending may be sustainable. However a strong marketing campaign followed by lackluster sales could be troublesome. This is especially true for EA, which is more vulnerable to such a scenario with SG&A/Sales of 29.64 percent in 2012 stemming from the high sales and marketing expenses touched on earlier.



### Section 2.6.3: R&D/Sales

Research and Development costs (R&D) form the cornerstone of many technology-focused companies and ATVI is no different (in this case, Product Development may be considered R&D). By measuring the ratio of R&D to sales, a clearer image of the importance of this spending on a company's operating income may be gained. For the five-year period measured, ATVI shows a noteworthy change in the R&D/Sales ratio. In 2007, the ratio stood at 8.80 percent and moved slightly higher to 9.30 percent in pre-merger 2008. Post-merger 2008 saw the ratio climb to 19.56 percent before gradually falling to 12.44 percent by 2012. Why this happened may be explained by examining ATVI's 10-K. As stated in the "Common Size Income Statement Trends" section above, a great deal of R&D expense came from the business consummation when Activision's spending was picked up by the new company. This ratio gradually levels out to 2007 levels as more money was spent on sales and marketing and maintaining the online subscription platform of "*World of Warcraft*".

R&D is a particularly interesting point of comparison between EA and ATVI, as EA's ratio of 29.25 percent in 2012 is more than twice that of ATVI in the same period. This suggests EA is betting strongly on the success of a future product line to generate sales and make up for the massive R&D spending, although ATVI was able to achieve even greater success in the past and present with comparatively small R&D expenditures.



## Section 2.7: Ratio Limitations

While ratio analysis may confer measurable, comparable information on a company in question, there is a limit to what may be gleaned from simply looking at financial statements. These limitations should be acknowledged when using ratios for analysis purposes.

### Section 2.7.1: GAAP Limitations

Because of the limitations inherent to GAAP, several discrepancies must be addressed with regard to ratio analysis. First, GAAP only measures what may be measured reliably. This leaves out assets which may be the cornerstone of a company's operations, but which are difficult to measure. For ATVI, these include the powerful name recognition of titles such as *"World of Warcraft"*, *"Starcraft"*, and *"Call of Duty"*. It should be noted that some of this recognition may be represented within the large amount of goodwill created following the 2008 merger. Another example is very specialized employee skill inherent to the designers, artists, and programmers which create the products. While they cannot be reliably measured quantitatively, they remain one of the company's most important assets.

A second GAAP limitation relates to non-capitalized costs. Expenses such as R&D and marketing expenses are spent towards the creation of a more valuable product. Although these costs may create more sales in the future, they are not represented in the balance sheet and are

merely expensed on the income statement, potentially under-valuing assets. This should be kept in mind when calculating ratios involving a company's asset value.

### **Section 2.7.2: Other Limitations**

Another important ratio limitation which should be addressed involves the effect of company changes on financial statements, most notably, mergers and acquisitions. The merger that took place in 2008 which created ATVI in its current state materially changed the make-up of the financial statements, and it is therefore more difficult to compare ratios before and after the merger. While the combined companies had similar operations and therefore similar financial statements, the balance of many line items still shifted. This has been noted as a cause of many ratio changes above and is very important to keep in mind when measuring changes over the five-year period.

A final, and most important limitation to keep in mind when using ratio analysis is the "means to an end" nature of the process. Ratios distill vast amounts of quantitative information into a convenient number for use when measuring a company's operating factors. This should not be assumed to represent a final product or a base for final conclusions on the company's future fate. Ratio analysis is simply a single tool in the financial analysis toolbox, and when used in conjunction with further research and due diligence, can help to better understand where a company may find itself in the future.

## **Section 2.8: Revenue Recognition Policies**

Revenue recognition may materially affect a company's results, and policies regarding it vary widely. According to GAAP, companies may recognize revenue when realized or realizable, and when earned. As noted in a previous section, ATVI reports large amounts of deferred revenue that make up a large part of the liabilities side of the balance sheet. This stems directly

from the nature of their revenue recognition policy. According to ATVI's 2012 10-K, "We (ATVI) recognize all of the revenue from bundled sales ( *i.e.* , packaged goods video games that include an online service component) on a deferred basis over an estimated online service period for such games" (ATVI 2012 10-K). Essentially, due to the online nature of many of the company's games, in which players take advantage of features over an extended period of time, revenue from these sales is only realized or realizable, and earned over a period following the sale. This explains the significant amounts of deferred revenue on the company's balance sheet, and represents a useful point to keep in mind when analyzing sales, liability composition, and the related ratios. This practice seems entirely appropriate, and may be expected to increase as more and more titles are released with online components.

## **Section 2.9: Restructuring Charges**

At certain points in a company's lifecycle it may undergo a restructuring which often involves adding, losing, or rearranging business segments for future operations. ATVI underwent such a restructuring several times in the five-year period analyzed, most notably during the 2008 merger. During this time, the company incurred expenses "mainly relating to severance payments of remaining interim employees who are currently assisting us to exit our non-core operations and under-utilized facilities" (ATVI 2008 10-K). These expenses totaled \$93 million in 2008. Following this, in 2009, ATVI incurred a further charge of \$23 million relating to continued restructuring efforts primarily composed of employee severance, facility exits, and contract termination fees. The last restructuring charge was seen in 2011, when the company chose to "focus on the development and publication of a reduced slate of titles on a going-forward basis...included the discontinuation of the development of music-based games, the closure of the related business unit and the cancellation of other titles then in production, along with a

related reduction in studio headcount and corporate overhead” (ATVI 2012 10-K). This refocusing of efforts cost the company a one-time charge of \$25 million in 2011.

From the perspective of an analyst examining the future prospects of ATVI, these restructuring charges may be viewed in a favorable light, as necessary efforts to help the company focus on changing industry expectations and standards. The 2008 and 2009 restructuring charges relating to the business combination may be viewed as a necessary byproduct of the merging of two large operations, where certain facilities and labor may become unnecessary or even redundant. These charges ensured a more streamlined, efficient company moving forward. The 2011 charges mainly focused on exiting the music genre of interactive entertainment, which at the time was seeing an exodus after the muted reception of the latest “*Guitar Hero*” title. While it is unfortunate the company had so many resources tied up in the genre, ceasing to plow resources into a dying franchise was a favorable alternative to losing time and money on future titles. Overall, ATVI’s restructuring efforts enable the company to move into the future putting its resources into relevant, profitable ventures.

## **Section 2.10: Foreign Currency Adjustments**

When companies operate in several different countries or regions with differing currencies, it is important to take foreign currency adjustments into account. These result from favorable or unfavorable shifts in the value of one nation’s currency relative to another’s. ATVI maintains operations in the U.S., Canada, the UK, France, Germany, Ireland, Italy, Sweden, Spain, the Netherlands, Australia, South Korea, and China. Because of these far-reaching operations, foreign currency adjustments are likely a factor in earnings. ATVI’s annual reports state that “Revenues and related expenses generated from our international operations are generally denominated in their respective local currencies. Primary currencies include euros, British

pounds, Australian dollars, South Korean won and Swedish krona.” Furthermore, “To mitigate our foreign currency exchange rate exposure resulting from our foreign currency denominated monetary assets, liabilities and earnings, we periodically enter into currency derivative contracts, principally swaps and forward contracts with maturities of twelve months or less” (ATVI 2012 10-K). This shows that the company creates a hedge to reduce earnings fluctuations resulting from foreign currency rate changes, and “associated gains and losses from changes in fair value are reported in ‘Investment and other income (expense), net’ and ‘General and administrative expense’” (ATVI 2012 10-K).

For the five-year period measured, foreign currency translation adjustments factored into each year’s comprehensive income. In 2007, there was an \$81 million loss from these adjustments, while 2008, 2009 and 2010 showed gains of \$19 million, \$11 million, and \$11 million respectively. In 2011 a loss occurred of \$61 million while 2012 returned to a gain of \$46 million. Losses suggest an unfavorable currency adjustment, while gains suggest favorable results. The gains and losses may be offset by currency hedges, accounted for in “investments and other income”. Ultimately, these adjustments affected comprehensive income as a profitability measure, but not standard net income metrics.

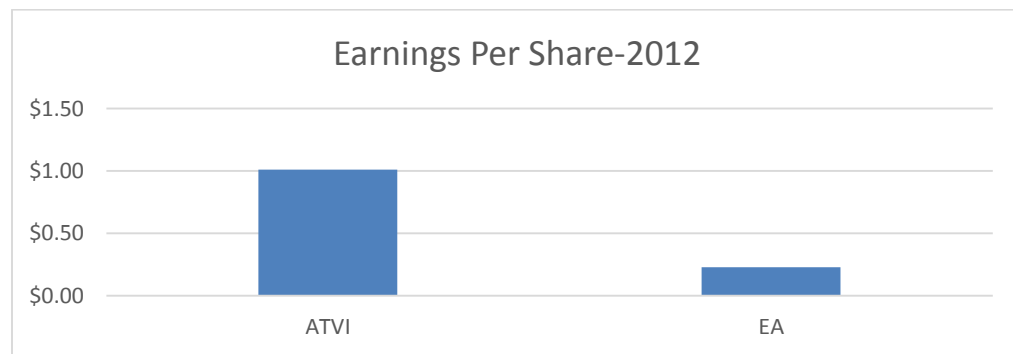
## **Section 2.11: Earnings Per Share**

Earnings per Share (EPS) is a measure of the amount of bottom-line, net income earned for each share of stock issued. It is often used as a measure of value by potential equity investors with a larger EPS generally being favorable. ATVI’s EPS over the five-year period measured shows gradual improvement, as well as the effects of the 2008 merger on earnings. EPS in 2007 was \$0.31 which leaped to \$1.19 in pre-merger 2008. Post-merger 2008 saw a net loss of \$267 million, equating to a loss per share of \$0.28. In 2009, profitability returned with an



EPS of \$0.09 followed by \$0.34 in 2010, \$0.93 in 2011 and a strong \$1.01 in 2012 (Compared with \$0.23 for EA in 2012). These numbers paint a picture of a company whose profitability is consistently improving over the years, particularly following the merger, and adding more value for shareholders.

When examining EPS, it is also important to look at the components, net income and shares outstanding. Net income was examined in a previous section and is known to be gradually improving through the five-year period. Shares outstanding rise from 273 million in 2007 to 289 million in pre-merger 2008. Following the merger, shares tripled to 946 million. 2009 saw a peak in share count at 1,283 million, before retreating to 1,222 million, 1,148 million, and 1,112 million in 2010, 2011, and 2012 respectively. This is the result of share buybacks during these years and is significant because these lower number of shares may be partially responsible for the more favorable EPS.



## Ch.3

### **Section 3.1: Receivable Analysis**

Receivables often represent a large portion of a company's asset side of the balance sheet, and therefore their consideration is an important part of any analysis. This consists of examining the types of receivables, the credit-worthiness of the customers relating to these receivables, several receivables ratios, bad debts expense, and how these receivables affect net income.

#### **Section 3.1.1: Types of Receivables**

ATVI's receivables consist only of accounts receivable "generated by the sale of our products and our subscription revenues" (ATVI 2009 10-K). This consists of money owed by customers from the company's primary business operations, and therefore is relatively standard for a consumer entertainment company.

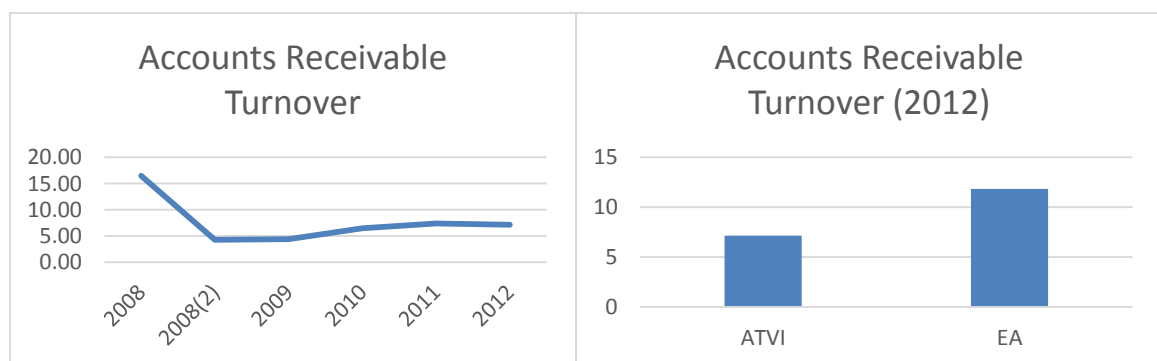
#### **Section 3.1.2: Customer Analysis**

According to ATVI's 10-K, their customer base includes "retail outlets and distributors, including mass-market retailers, consumer electronics stores, discount warehouses, and game specialty stores in the United States and countries worldwide" (ATVI 2009 10-K). These are likely the primary source of receivables payments and pose little credit risk, as many of these outlets include large stores such as GameStop and Wal-Mart. It should be noted that each accounted for "11 percent of the consolidated net revenues for the year ended December 31, 2008 and

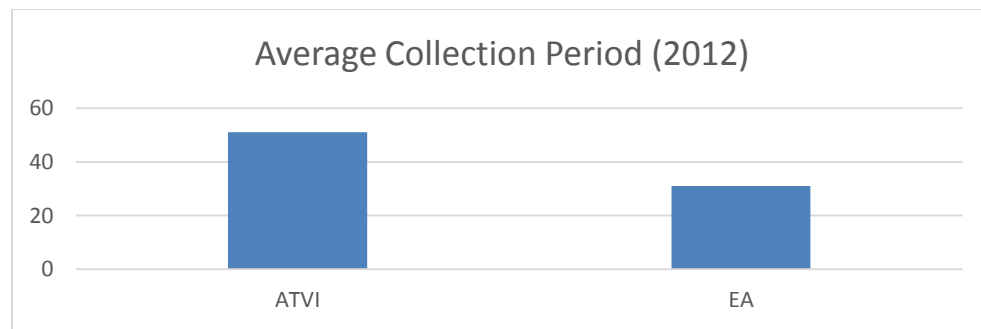
accounted for 15 percent and 9 percent of consolidated gross receivable at December 31, 2008, respectively” (ATVI 2009 10-K). This could pose a concentration of credit risk, as if one or both customers were lost operations would be greatly impacted, although this is unlikely due to the size of ATVI’s operations and the importance of video game sales for these stores.

### Section 3.1.3: Accounts Receivable Turnover and Average Collection Period

Two useful ratios when analyzing accounts receivable are Accounts Receivable Turnover (ART) and Average Collection Period (ACP). Accounts Receivable Turnover is measure as Sales divided by Average Gross Accounts Receivable. This ratio gives insight into how many times accounts receivable were collected (turned over) during the period. A larger number indicates receivables are being collected faster. For the five-year period measured, ATVI ART decreased significantly. ART in pre-merger 2008 was 16.46 and plummeted to only 4.28 in post-merger 2008. The ratio rose to 7.16 by 2012, still significantly lower than pre-merger measurements. The quantitative reason for this decrease is that average gross accounts receivable are increasing faster than yearly sales and thus ATVI’s collection efficiency is in need of improvement. Comparatively, EA’s 2012 ART stood at 11.82, significantly stronger than ATVI’s and indicative of sounder collection policies.



A second measure of accounts receivable efficiency is the Average Collection Period (ACP) and is found by dividing Average Gross Accounts Receivable by Average Daily Sales. This ratio measures the average time receivables are outstanding before being collected. Like ART, this measure shifted greatly following the 2008 merger. Pre-merger 2008 saw ACP at 22.17, while the post-merger figure leaped to 85.24 before falling to 50.96 by 2012. This suggests ATVI was taking on average twice as long to collect receivables as before the merger. The ratio increases because accounts receivable are increasing faster than average daily sales, a similar cause as that seen in ART. Predictably, EA's ratio is stronger at 31, reinforcing their stronger receivables collection first shown in ART.



Ostensibly, the changes in these ratios would suggest that as a larger company, ATVI is having difficulties collecting outstanding receivables as compared to its pre-merger collections. However, there are several other explanations that must be taken into account. Firstly, it is possible that ATVI took on longer-paying customers, although this is less-likely as the retail venues which comprise the company's major customers are unlikely to change dramatically. Another possibility is that the company may have increased its provisions for allowances on doubtful accounts. While doubtful accounts did increase following the merger (\$86 million to \$268 million), the increase was not as large as the increase in total accounts receivable. The final and most likely option is that the combined company may have extended credit terms in order

to capture new customers and market share from major competitors such as EA. This merger put ATVI in heated competition with EA to become the largest and most-profitable interactive entertainment company focusing on almost identical customers. In this situation, such a strategy would not be unheard of. However, it should also be considered that with a much larger customer base and yearly sales, accounts receivable collection has lagged and turnover becomes more difficult when compared with a smaller portfolio of receivables.

#### **Section 3.1.4: Bad Debt Expense and Uncollectible Accounts**

Uncollectible accounts and bad debts expense represent portions of receivables that are not expected to be collected or realized. Such expenses are inevitable for most companies due to the credit risk inherent in dealing with debtors. ATVI accounts for these bad debts by analyzing "...the age of current outstanding account balances, historical bad debts, customer concentrations, customer creditworthiness, current economic trends, and changes in our customers' payment terms and their economic condition, as well as whether we can obtain sufficient credit insurance" (ATVI 2009 10-K). This method incorporates the commonly-used "aging analysis" and is a reliable way of estimating bad debts. Additionally, ATVI also holds reserves against accounts receivable in order to allow "...customers a credit against amounts they owe us with respect to merchandise unsold by them. We may permit product returns from, or grant price protection to, our customers under certain conditions" (ATVI 2009 10-K). These, in turn, become allowances for doubtful accounts which is netted against the accounts receivable balance on the balance sheet.

Over the five-year period measured, ATVI's allowances for doubtful accounts increased along with the accounts receivable balances at a similar pace. Allowances in 2007 were \$91 million, which moved to \$268 million by post-merger 2008. This figure slowly advanced along

with accounts receivable to a peak of \$377 million in 2010 before retreating to \$330 million by 2012. As a percentage of total accounts receivable, allowances remained fairly stable, beginning at 38 percent in 2007 before decreasing to 18 percent by post-merger 2008. This moved back to 37 percent by 2010 and ended at 32 percent in 2012. The aberration in post-merger 2008 was probably due to the assumption of large amounts of Activision's accounts receivable which had higher allowances allocated to them. While these percentages seem extreme, it due to the very conservative approach ATVI takes with its reserves and ensures the company's earnings will not be drastically affected due to a large-scale return of products.

#### **Section 3.1.4: Accounts Receivable and Net Income**

Allowances tied to accounts receivable are a powerful tool for altering net income figures. This practice is called "income shifting" and often involves increasing or decreasing allowance estimates to increase or decrease income in a certain period. This is possible due to the recognition of bad debts expense on the income statement in the year the allowance is estimated. ATVI recognizes this in its 10-K by reporting: "Material differences may result in the amount and timing of our revenue for any period if factors or market conditions change or if management makes different judgments or utilizes different estimates in determining the allowances for returns and price protection. For example, a 1 percent change in our December 31, 2012 allowance for sales returns, price protection and other allowances would have impacted net revenues by approximately \$3 million" (ATVI 2012 10-K). Motivation for doing this may include shifting income from an exceptionally good year to make up for poor performance in a future year (cookie jar reserve), or taking a larger hit on income in a current period to create a reserve for future periods (big bath).

## **Section 3.2: Inventory Analysis**

Inventories are a major portion of the balance sheet for manufacturers and merchandisers. These costs are often capitalized on the balance sheet when purchased or produced. To analyze inventories, it is important to look at the types of inventories held, the inventory flow system used, select ratios such as Inventory Turnover and Average Day Sales Outstanding, and how inventories affect net income.

### **Section 3.2.1: Types of Inventories**

ATVI's inventories consist of "...materials (including manufacturing royalties paid to console manufacturers), labor and freight-in" (ATVI 2012 10-K). It may be assumed that these include unshipped video game titles. While ATVI creates and distributes these titles, many are shipped to retail outlet, keeping inventory at relatively low levels for the company.

### **Section 3.2.2: Inventory Flow System**

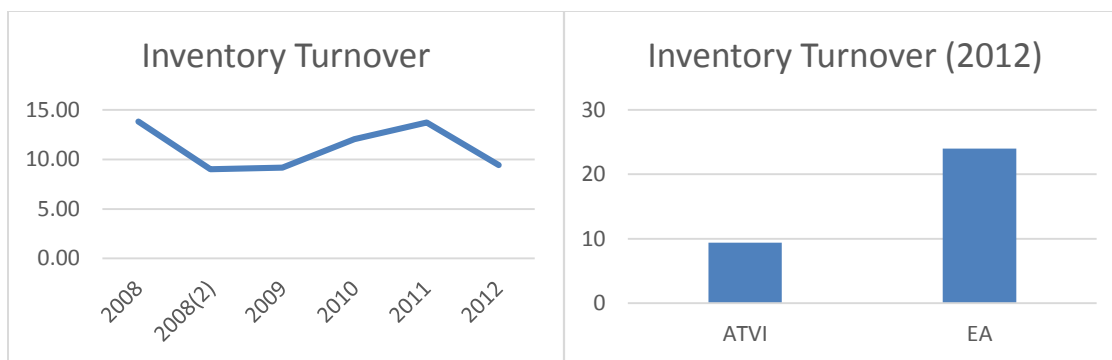
There are several methods to choose from when measuring inventory including FIFO, LIFO, and Average Cost. Each has specific benefits and drawbacks and the decision regarding which to use may have a significant impact on a company's reported earnings, particularly for manufacturers and merchandisers. As stated in the 2012 10-K, Activision Blizzard's inventories are "...stated at the lower of cost (weighted average method) or net realizable value" (ATVI 2012 10-K). As the name suggests, the average cost method yields the most balanced value for inventory and earnings. This was probably selected for this reason, as well as due to the relatively small balance sheet value attributed to inventories.

It should also be noted that ATVI reviews inventories on-hand and in retail channels for potential write-downs. These are based on “...excess or obsolete inventories determined primarily by future anticipated demand for our products” (ATVI 2012 10-K). The write-downs are measured using the difference between the cost of inventory and the net realizable value. ATVI acknowledges that these numbers are inherently difficult to measure and are strongly dependent on market condition.

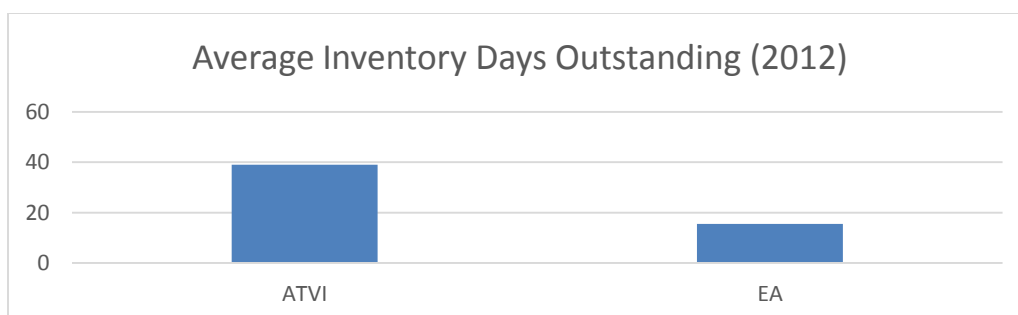
### **Section 3.2.3: Inventory Turnover and Average Inventory Days Outstanding**

Two common ratios when analyzing inventory are Inventory Turnover (IT) and Average Inventory Days Outstanding (AIDO). IT is calculated by dividing COGS by Average Inventory. Similar to the Accounts Receivable Turnover, this measures the number of times inventory was “turned over” or sold each year. A higher number indicated increased liquidity and a lower chance of write-offs for inventory obsolescence. ATVI’s IT in 2007 was close to 13, indicating its inventory was turned over 13 times this year. Pre-merger 2008 IT was 14, which fell to 9 by post-merger 2008. It stayed near this level until 2010 when it rose to 12, followed by 13 in 2011. 2012 saw a retreat to 9.4, indicating a less-liquid year for inventory management. This is well below that of its closest competitor, EA, which achieved an average IT of 24 in 2012. This would suggest EA has far superior inventory management practices and therefore increased liquidity. An underlying reason may be the proliferation of EA’s online store, Origin, which allows for digitally distributed content over a PC. This eliminated excess inventory, but is unlikely to have such a dramatic effect on inventory turnover.





The Average Inventory Days Outstanding ratio is found by dividing Inventory by the Average Daily Cost of Goods Sold. This ratio grants insight into how many days it takes a company to sell its year-end inventory, with a smaller number being more favorable. For ATVI AIDO in 2007 was 28.5 which rose sharply to 40.5 by post-merger 2008 before falling to 26.6 in 2011 and returning to 39 by the end of 2012. During this same period in 2012 EA achieved AIDO of 15.53, echoing their stronger inventory turnover and liquidity. These numbers show that ATVI's inventory became less liquid and more difficult to sell following the 2008 merger and improved little through 2012, with the exception of 2011. This may be caused by the increase in overall inventory size as the two companies merged. The company may be tweaking inventory management and distribution techniques to better accommodate this larger inventory, although little progress has been seen by 2012.



Ultimately, IT and AIDO shed light on both inventory quality and asset utilization. A higher turnover is considered favorable as it shows that inventory is being turned into sales faster instead of sitting in a warehouse using resources and risking obsolescence. This is especially important in the interactive entertainment industry, as tastes and technology change rapidly, making older games and products much less-salable over time. Asset utilization seeks to hold an efficient amount of inventory as to avoid stock-outs and lost sales, but not accumulate excess storage costs. This seems to be an area of potential improvement for ATVI as it works to find the right balance between too much inventory that decreases turnover, and too little that risks lost sales.

#### **Section 3.2.4: Inventory and Net Income**

Like receivables, Inventory is closely tied to income. This is because the elimination of inventories turns into sales which flows to net income on the bottom of the income statement. Inventory measurement and management techniques are often used to manipulate income from one period to the next. A primary example is the choice between First-in-First-Out (FIFO), (Last-In-First-Out) LIFO, and Average Cost methods when accounting for inventory. FIFO usually results in the greatest net income by lowering COGS, while LIFO results in the lowest by increasing COGS. Average Cost lands somewhere in the middle of the two and is the chosen method of ATVI. Companies often use these methods to increase income in the current period or lower their tax burden. By choosing Average Cost, ATVI chooses to forgo either strategy of income manipulation.

### **Section 3.3: Property, Plant, and Equipment Analysis**

Property, Plant, and Equipment (PPE), represents capitalized, often physical assets that will be used in future cash flow generation for a company. PPE is often the largest portion of a company's balance sheet, as it includes large physical assets like land, factories, and equipment. When analyzing PPE, important concepts include depreciation, additions to PPE, impairments of PPE, service life of PPE, and its effect on net income.

#### **Section 3.3.1: Depreciation of PPE**

ATVI utilizes the straight-line method of depreciation for PPE, as stated in its 10-K. This means that long-lived assets are expected to use their value equally each year over a period of time ("...25 to 33 years, for buildings, and 2 to 5 years, for computer equipment, office furniture and other equipment") (ATVI 2012 10-K). Unlike methods such as double-declining balance, straight-line seeks to accumulated even amounts of depreciation each year, thus normalizing earnings.

#### **Section 3.3.2: Additions to PPE**

Over the five-year period analyzed, ATVI added to its PPE, both through the 2008 business combination and through capital expenditures (capex) made throughout the years. In 2007, PPE was \$46.54 million with additions of \$17.94 million to PPE during the year. This is gleaned from the statement of cash flows, which shows capex of \$17.94 million, as well as the 10-K which explains that capex is "primarily related to property and equipment" (ATVI 2007 10-K). By post-merger 2008, PPE had moved to \$149 million although capital expenditures that period were only \$46 million. The balance was likely PPE resulting from the business

combination with Activision. PPE moved to a high of \$169 million in 2010 before ending at \$141 million in 2012. This decrease was caused by depreciation of \$198 million in 2010, \$148 million in 2011 and \$120 million in 2012 which outpaced capital expenditures of \$97 million, \$72 million, and \$73 million in 2010, 2011, and 2012 respectively. These numbers show that PPE is a relatively small part of overall assets for ATVI and the company has not made significant investment in it since the merger.

### **Section 3.3.3: Impairments of PPE**

ATVI showed no impairments of PPE over the five-year period measured. This is probably due to the relative unimportance of long-lived physical assets in the company's business model. Had the company been focused on manufacturing or had significant property or equipment holdings, it is likely these assets would have depreciated in fair value since their purchase and therefore be eligible for a write-down in value, or impairment.

### **Section 3.3.4: Efficiency, Age, and Service Life Analysis of PPE**

To further analyze PPE, it is useful to calculate several key formulas measuring the efficiency and service life of these assets. Several useful measures include the PPE Turnover, the Average Useful Life, and the Percent Used Up. The PPE Turnover measures how much capital investment is needed for a given level of sales. A higher turnover increases profitability and implies a more efficient use of PPE. ATVI's PPE Turnover for 2007 was 32.5 then peaked at a staggering 53.14 in pre-merger 2008 before dropping to 20.3 in post-merger 2008. The figure then stayed in the 20s and low 30s, ending at 34.4 in 2012. These results are impressive, even for a company in a knowledge-based industry. ATVI's closest competitor, EA saw a maximum PPE turnover of 11.89 in 2009 and showed 7.29 as of 2012. This indicates that ATVI is making far

more sales per dollar invested in PPE than its competitor and may be considered to be operating more efficiently.

The final two ratios deal with the useful life of the PPE and the depreciation they incur over this life. ATVI's PPE is comprised of Land, Buildings, Leasehold improvements, Computer equipment, and office furniture and other equipment. The Average Useful Life ratio may be used to judge how conservative or liberal the company was when making its useful life estimates. It is calculated as the cost divided by depreciation expense. For 2012, this indicates ATVI's PPE has an average useful life of 5.7 years. This is rather low, but is easily explained by examining the break-out of PPE of which computer equipment is 70 percent with an estimated useful life of 2-5 years. The second ratio, Percent Used Up, gives insight into how depreciated a company's PPE is thus far. It is found by dividing accumulated depreciation by depreciable asset cost. As of 2012, ATVI's depreciable assets are 72 percent used up. Because of this, it may be reasonable to expect further capital expenditures in the future to make up for ageing computer equipment.

#### **Section 3.3.5: PPE and Net Income**

As explained above, a company's PPE accumulates depreciation charges throughout its useful life, thus decreasing net income. Companies often try to manipulate this through the use of alternative depreciation methods such as double-declining balance (DDB) rather than straight-line. By using DDB, large depreciation charges are absorbed early in the assets' lives, thus increasing income in later years and saving taxes in current ones. ATVI does not engage in this practice and instead opt for straight-line depreciation which will depreciate assets equally over their useful life.

## **Section 3.4: Intercorporate Investments and Goodwill**

### **Section 3.4.1: Intercorporate Investments**

It is common for companies to hold intercorporate investments, or investments in securities issued by other entities, on their balance sheet. These are often held to increase return over holding cash, or to gain stakes in other companies' operations. ATVI recognizes their short-term intercorporate investments as "...classified as available-for-sale and are carried at fair market value" and "generally mature between three and thirty months" (ATVI 2012 10-K). These securities have primarily been money-market funds, corporate bonds, and mortgage-backed securities. Long-term securities have primarily been auction rate securities which "...allows holders to sell their notes and resets the applicable interest rate at pre-determined intervals, usually every 7 to 35 days" (ATVI 2008 10-K).

The value of these investments have changed notably over the five-year period measured. For 2007, short-term investments totaled \$570.44 million and there were no long-term holdings. By pre-merger 2008, short-term investments had fallen to \$52.96 million, primarily due to the sale and maturity of \$984.94 million of securities. Long-term investments at this point were \$91.22 million. By 2009, short-term investments had returned to a prominent \$477 million while long-term investments edged lower to \$23 million. Short-term securities ended 2012 at \$416 million with long-term at \$8 million. During this year, maturities of investments were \$444 million while purchases were \$503 million. These were primarily corporate bonds and U.S. Treasuries. These figures indicate a significant amount of cash flow is devoted to the maintaining of a short-term securities portfolio to boost income, while subsequently being exposed to interest rate risk (although this is mitigated due to the short-term nature of the securities).

### **Section 3.4.2: Goodwill**

Goodwill often arises during a merger or acquisition in which one company pays an amount over the acquired company's book value. The difference is goodwill. As noted in previous sections, goodwill is a very significant part of ATVI's balance sheet, particularly after the 2008 business combination when goodwill significantly increased from \$279 million to \$7,227 million where it remained close to through 2012. This was due to a significant premium paid for Activision, stemming from the unrecorded value of the company's franchises and perceived profitability potential when merged with the operations of Vivendi Games.

ATVI's goodwill is "deemed to have an indefinite useful life and is not amortized but rather tested at least annually for impairment at the reporting unit level. An impairment loss is recognized if the carrying amount of goodwill is not recoverable and its carrying amount exceeds its fair value." (ATVI 2012 10-K). Goodwill was impaired for \$16 million in 2007, \$278 million in 2010 and \$10 million in 2012. Goodwill was written up by \$75 million in 2011. This indicates a shifting value in the goodwill created following the merger, and alternating outlooks on the potential cash flow of the company's assets.

### **Section 3.5: Share Repurchases, Stock Dividends, and Stock Splits**

Companies may choose to alter their stockholders' equity and share amounts through events such as share repurchases, stock dividends, or stock splits. These strategies are used to various effects with regard to shares outstanding, share price, and treasury stock balances.

### **Section 3.5.1: Share Repurchases**

Share repurchases may be used for various purposes. A common reason is to signal that a company's stock is undervalued in order to stimulate investor purchases and raise the price so the repurchased shares (treasury stock) may be sold at a gain or to simply bolster stock price. Another rationalization is to counter the dilution stemming from stock options, thereby propping-up EPS. It should be noted that when a company sells treasury stock, there is no gain recorded, only an increase or decrease in APIC. ATVI entered several significant share repurchase programs during the five-year period covered. The first began in 2008, in which the company agreed to repurchase up to \$1 billion in common stock, later increased by \$250 million in 2009. In 2008 and 2009, the company purchased a total of 104.3 million shares for a total cost of \$1,124 million, completing the program.

The next repurchase program began in 2010 in which the company agreed to repurchase \$1 billion in common stock, which was completed by the end of 2010. A similar 2011 program was instated, culminating in the purchase of 60 million shares for a total of \$682 million. Finally, in 2012 a final repurchase plan was en-stated for the acquisition of \$1 billion of common stock between April 1, 2012 and March 31, 2013. As of December 31, 2012, 4 million shares were repurchased for \$54 million. Ultimately, this aggressive stock-repurchase strategy indicates that ATVI likely saw their share price as significantly undervalued by the market, and desired to send a signal to investors and analysts of this, thereby increasing the purchases of their seemingly-cheap stock. This was a prudent strategy, as ATVI's share price appreciated significantly since the latest share repurchases, from an average price of \$12.32 to \$17.23 as of 8/15/2013.



### **Section 3.5.2: Stock Dividends and Stock Splits**

In addition to significant share repurchases, ATVI also engaged in stock dividends and splits. A stock dividend is a method of returning capital to investors in the form of additional shares of stock, thus diluting investors and decreasing EPS but providing the opportunity for investor gains off potential share-price appreciation. This may be accomplished through a stock split, in which a company issues one additional share for each share owned by a stockholder (2-for-1 split). A stock-split is often used when a company believes its share price is too high, thereby discouraging new investors. This was the form of stock dividend which ATVI engaged in during late 2008. While the par-value of each share remains unchanged, each share's market value is halved to make up for the doubling of shares on the market. Because of this, many analysts see stock splits as an act to appease stockholders without actually increasing their wealth or holdings.

### **Section 3.6: Operating Leases**

When companies enter into lease agreements, the leases are often classified as either operating or capital leases. While capital leases record both assets and liabilities related to the agreement, operating leases forgo these line items and instead only enter rent expenses on the income statement related to the agreement. These two treatments affect the components of the company's financial statements, as well as key ratios such as RNOA, NOPM, NOAT, ROE, and FLEV. Traditionally, analysts are encouraged to capitalize operating leases, as recording only the expenses related to lease payments and not the operating assets and non-operating liabilities are understood to negatively impact the accuracy and usefulness of these key ratios.

### **Section 3.6.1: Capitalization of Operating Leases**

In order to capitalize operating leases, it is necessary to first determine a discount rate before computing the present value of future operating lease payments and then adjusting the financial statements accordingly. The applicable discount rate is usually found by either using the present value of capital lease payments to impute an interest rate, or by using the interest rate paid on the company's long-term debt. Since neither of these were options for ATVI, it was necessary to use comparative long-term debt interest from close competitors such as Take-Two Interactive. This yielded a rate of roughly 5 percent, which was then used to find the present value of the operating lease payments from 2013 and onward. This totaled to \$376 million from an undiscounted total of \$422 million.

To adjust the balance sheet, Net Operating Assets and Net Non-Operating Obligations are increased by the computed present value above. This returned a new NOA of \$11,269 million and NNO of -\$48 million. Next, when adjusting the income statement, expenses relating to the operating lease are subtracted from operating expenses, while depreciation and interest expense from the leased assets are added. While ATVI does not break out rent expense from operating leases separately on the income statement, it may be inferred from the recorded operating lease expense for 2012 in the 2011 10-K, equal to \$173 million.

Depreciation expense is found by dividing leased asset value (found above to be \$376 million above) by its estimated remaining life, or 7.40 years (5 years recorded + 2.4 years after the fifth year), yielding \$51 million. Finally, interest expense is calculated as 5 percent of the \$376 million lease liability, or \$19 million the first year. With these alterations, adjusted operating expense totals \$3,302 million, \$103 million less than the unadjusted amount.

### **Section 3.6.2: Adjusted ROE Disaggregation**

After adjusting financial statement items, it is possible to recompute ROE disaggregation ratios to yield more meaningful values. Firstly, NOPM increases from 23.52 percent to 25.78 percent due to a higher adjusted NOPAT due to the lack of rent expense but inclusion of depreciation. Next, NOAT falls to 0.42 from 0.46 because of the increase in operating assets from the capitalization of leases. RNOA is increased from 10.87 percent to 11.11 percent. This stems from an increase in NOPM but is slightly offset by a subsequent decline in NOAT, as detailed above. This shows ATVI as more profitable while also requiring more capital to support operations compared to the unadjusted number. ROE edges up to 11.37 percent from 10.15 percent, with NOR becoming a larger portion of total return by edging into positive territory at 0.26 percent from a previous -0.72 percent. Finally, FLEV remains negative at -0.0042 due to a still insignificant NNO.

### **Section 3.6.3: Rationalization for Operating Leases**

Ultimately, managers prefer to structure leases as operating rather than capital for several reasons, as illustrated above. When using an operating lease, leased assets and liabilities stay off the balance sheet, thereby improving measures such as NOAT and liabilities-to-equity, which may be helpful in maintaining a higher credit rating and lower interest rates. The portion of ROE coming from RNOA also appears higher, potentially improving the perceived quality of ROE and the efficient use of Operating Assets. Finally, during the early years of a lease term, rent expense is usually lower than the comparative interest and depreciation expense from a capital lease, increasing earnings in those years. It is important to remember that while this strategy may seemingly make a company more attractive, conversion to a capital lease often offers more useful insights into a company's leverage and operations.

### **Section 3.7: Pension Considerations**

The funding of employee pensions is a major concern for many businesses, particularly as of late when many municipalities are seeing their pension obligations overwhelm their finances. There is little to discuss with regard to ATVI's pension policy as the company shows no pension information in their 10-Ks.

## Ch.4

The final step in our analysis of ATVI is to use our previous qualitative and quantitative research to create several valuation models to determine a fair price for the company and its equity interests. This will be accomplished by using the Public Company Comparables, Discounted Cash Flow, and Residual Operating Income models. Each method is likely to produce a slightly different valuation but provide further insight into the value of ATVI. However, our first step is to project the company's financial statements five years into the future to use as a base of our analysis.

### **Section 4.1: Financial Statement Projections**

Each primary valuation model is based off of projected financial statements (Balance Sheet, Income Statement, Statement of Cash Flows). These are created using assumptions for growth rates, relative relationships between line items, and certain key events likely to occur in the near future.

#### **Section 4.1.1: Income Statement Projections**

The projecting income statements is built from several primary assumptions, most notably the growth rate of revenue, and the percentage relationships between revenue and other line items. Often, previous years' metrics are used as a reference for forward assumptions.

For the previous three years, ATVI's revenue grew at a median growth rate of 4 percent, with the lowest rate (2 percent) occurring most recently in 2012. Based on this, 2013 growth rate projections were held at 4 percent, before rising to 5 percent in the next four years due to the release of a new generating of gaming consoles in late-2013, which often correlated to increased interest in the industry and may justify a moderate 5 percent growth rate.

Operating income and expense line items such as COGS, R&D expense, and depreciation are tied to revenue through simple percent-correlation methods which see these costs increasing proportionately to revenue in future years. These were all held constant between 2012 and future periods with the exception of depreciation and amortization, and interest income. Depreciation and amortization was carried down to 2 percent from 2.5 percent due to decreased capital investments in recent years and held constant thereafter. Interest income was calculated using the sum of the average holding in cash and cash equivalents, short-term investments, and long-term investments and multiplying by an assumed effective cash interest rate of 2 percent. Finally, the effective tax rate was held at a conservative 21 percent, the maximum of the previous three years.

Using these assumptions, ATVI's net income rises slightly in 2013 to \$1,489M from \$1,149M in 2012. Profit then falls moderately in 2014 before seeing a steady rise to \$1,654M by 2017. These growth rates are dramatically lower than the double-digit rates seen in the previous three years following the merger, but are justified by the maturity of several of the company's key products and an overall lag in the game industry. Results for sales following the release of the new consoles many paint a different picture moving forward, but thus far consumer excitement and assumed adoption seems muted.

### **Section 4.1.2: Balance Sheet Projections**

Similar to the income statement projections, the balance sheet is projected using simple percentage assumptions tied primarily to income statement accounts projected above. Assets such as accounts receivable are tied to revenue, as a direct relationship exists between these two accounts. Similarly, inventory, software development, and accounts payable are projected as a percentage of COGS each year. While this relationship is less direct, these line items may be reasonably tied to the costs that likely create them (COGS). Other items such as short-term securities and PP&E are determined using the assumed purchase and maturity/depreciation schedules, although for simplicity's sake these were kept constant in the projected years. Additionally, stockholders' equity accounts including additional paid-in capital, accumulated other comprehensive income, and retained earnings were projected using changes in corresponding income and cash flow statement accounts, many of which were kept constant following the last historical year (excluding retained earnings which used a flexible net income figure). Finally, it should be noted that the long-term debt of \$2,211 million stems from the planned purchase agreement in which ATVI will purchase 429 million shares of common stock from Vivendi for \$5.83B in cash including \$2.211B in debt<sup>21</sup>. No maturity schedule was provided, so the debt balance is assumed constant.

### **Section 4.1.3: Cash Flow Statement Projections**

The final statement to project was the cash flow statement, which carries in items from the projected income statement and balance sheet to arrive at a net cash position for the company. First, non-cash items such as depreciation, amortization, and stock-based compensation are pulled directly from the income statement items above. Less-predictable

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<sup>21</sup> ATVI 10Q Filed 11/6/13

items such as losses on PP&E and deferred income taxes were left out in future years. Next, changes in operating assets and liabilities are primarily simple differences taken from projected and historical balance sheet accounts, with the software development and IP licenses incorporating several related balances. Finally, in the absence of predicted purchase and maturity schedules, cash flows from investing and financing activities were assumed null with the exception of capital expenditures (predicted earlier as a percentage of revenue) and common stock (purchase detailed above). Ultimately, this resulted in a new cash balance which flowed back to the balance sheet and insured an equality between assets and liabilities and stockholders' equity in future years.

## **Section 4.2: WACC Calculation**

The weighted-average cost of capital (WACC) is primarily used as the discount rate in Discounted Cash Flow valuations and other core financial models. The metric combines the weighted cost of equity and cost of debt to yield the value by which future cash flows should be discounted to adjust for risk, the time value of money, and how much return investors require before they will invest.

### **Section 4.2.1: Cost of Equity**

The cost of equity is generally composed of two costs: the cost of dividend issuances and the future share price appreciation given up by the company by issuing shares to other parties. The most common way of calculating the cost of equity is through the Capital Asset Pricing Model (CAPM) which adds the risk-free rate to an equity risk premium multiplied by levered beta. Breaking this formula down, the risk-free rate generally equals the recent long-term treasury yield, deemed to be riskless by the market (this analysis uses the 20-year treasury



rate as of 10/21/2013). The equity risk premium is trickier and is often contested by finance professionals. It is generally agreed to be the extra yield earned on an index that tracks the stock market in your country, but what that yield is assumed to be is not standardized (this analysis will assume a conservative 7 percent). Finally, the beta measures the riskiness of the company relative to others in the market; a larger beta indicates more risk and more volatile return (historical beta of 0.67 will be used in this analysis). Using these assumptions, ATVI's cost of equity is 7.89 percent.

#### **Section 4.2.2: Cost of Debt**

A company's cost of debt is generally considered to be the interest rate it pays on its long-term debt outstanding. This percentage is then multiplied by the tax effect to account for the tax deductibility of interest paid on debt. Due to this effect, the cost of debt is generally lower than the related cost of equity.

Before 2013 ATVI had no long-term debt outstanding. However, following the "Purchase Transaction" described above, the company will take on debt of \$2,211 million. This event is built into the assumptions used to calculate WACC. ATVI does not disclose an exact interest rate which will be paid on the debt, and only describes it as "...an annual rate equal to an applicable margin plus, at our option, (A) a base rate determined by reference to the highest of (a) the interest rate in effect determined by the administrative agent as its "prime rate," (b) the federal funds rate plus 0.5 percent and (c) the London InterBank Offered Rate ("LIBOR") rate for an interest period of one month plus 1.00 percent, or (B) LIBOR".<sup>22</sup> For purposes of calculating WACC, a rate of 6 percent will be used, referenced from comparable interest rates from competitors such as EA and Take-Two Interactive.

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<sup>22</sup> ATVI 10Q Filed 11/6/13

### **Section 4.2.3: WACC Value**

Using the above values for cost of debt (6 percent) and cost of equity (7.98 percent) yields a WACC of 7.50 percent. This value is weighted heavily towards cost of equity due to its outsized importance in ATVI's financing, with the cost of debt coaxing the value down slightly. Since the cost of equity is almost always greater than that of debt, a primarily equity-financed company such as ATVI may expect a larger discount rate attributed to its future cash flows than one which relies on tax-deductible debt financing. This value for WACC may now be applied as the discount rate to the related Discounted Cash Flow and Residual Operating Income valuation models.

### **Section 4.3: Public Comparables Analysis**

The first valuation method utilized for ATVI was public company comparables, (public comps) analysis. This methodology finds a per share value for the target company using metrics and multiples of related companies as a guide. This form of analysis is reliable due to its use of real values from close competitors to determine a company's value, with fewer assumptions than in other methodologies. However, few companies are perfectly comparable, and this may inhibit the reliability of any value found.

The initial step in any public comps analysis is to determine a universe of comparable companies. Because ATVI sits in a unique market segment with few publically-traded competitors, only a small number were chosen for the model. These companies included EA, Take-Two Interactive, and Zynga Inc. (an original model included THQ Inc. which entered into Chapter 11 bankruptcy and was subsequently removed). These companies were chosen due to their similarities with ATVI in industry, size, product, and customer. Other consumer-retail companies

selling electronics could have been included, but due to unique aspects of the videogame industry such as revenue recognition and the relationship between game and console sales, these companies were left out.

Next, key metrics and multiples were spread for each company over three years. These included enterprise value (EV), revenue, revenue growth, EBITDA, EBITDA margin, EV/EBITDA, and EV/revenue. These were chosen due to their relevancy for measuring the performance of each company. EBITDA was chosen over EBIT due to the relatively small impact of non-cash expenses on these intellectual-property focused companies. It should be noted that EBITDA is not intended to be an accurate prediction of cash flow, but rather stands as a comparison tool between the companies being compared. After spreading these numbers, the maximum, 75<sup>th</sup> percentile, median, 25<sup>th</sup> percentile, and minimum of each were taken. This allows for flexibility when arriving at a conclusion for the value of ATVI, taking into account a broad range of values, rather than a single number. These values were then compared to ATVI's related figures in the current time period.

Moving forward, comparing the calculated metrics and multiples of comparable companies to those of ATVI yielded interesting results. Examining the EV/revenue shows ATVI EV valued slightly higher with regard to its revenue, at 1.5x, larger than even the max multiple in the comparables set (EA). This is seen continuing into 2013, before being edged out by EA's 1.5x multiple as ATVI's falls to 1.4x. This seems to indicate a premium placed on the revenue earned by the company over its competitors, possibly due to its strong product lineup, and impressive EBITDA margins of 39.1 percent over its competitors median 16.6 percent in 2012. Contrasting this, EV/EBITDA multiples tell a different story with a median of 5.3x in 2012 and an impressive maximum of 14.8x coming from EA. ATVI's figure remains ~3.9x into the forecasted years.

Looking at the inputs, this could be explained by ATVI's large EBITDA stemming from its substantial EBITDA margins mentioned above, thereby lowering the this ratio when compared to its competitors with notably lower margins.

Ultimately, calculating ATVI's implied valuation range using the public comparables yields a diverse spread of values from \$5.61 to \$65.70. This unusually large gap is indicative of the small number of comparable companies, and the contrasts between the valuations on those included. In particular, EA's large 2012 and 2013 EV/EBITDA multiples were responsible for the largest differentials, whereas the spread on other metrics was far less pronounced. Using this valuation range, it may be reasonable to conclude ATVI has a value between 7.84 and 11.61 a share when using only public company comparables as an indicator. This is assuming a value closer to the maximum of EV/revenue values (due to the company's historically larger multiple) and the minimum of EV/EBITDA (taking into account the distortion caused by EA's projections). However, this takes into account only one valuation methodology, and these numbers must be compared with a broader range of results from a DCF and ROPI analysis which will be elaborated on next.

#### **Section 4.4: Discounted Cash Flow Analysis**

The second valuation method performed on ATVI was the discounted cash flow (DCF) method. This model values a company based off its projected future cash flows and terminal value, discounted to the current period. This requires assumptions for revenue growth and the discount rate to bring the cash flows to their present value (WACC is generally used for this purpose and was calculated in an earlier section). Because of the number of assumptions that must be made and the range of values that a small change in any assumption can make, a discounted cash flow analysis is more vulnerable to manipulation than the comparable

companies analysis. With this in mind, the results of the model are presented using sensitivity tables to show a range of possible values using incremental differences in key assumptions. Additionally, two methods of determining the terminal value, the multiples and Gordon growth methods, will be elaborated upon.

Firstly, the model assumes a revenue growth rate of 4 percent in 2013, and 5 percent in 2014-2017. This reflects lower game sales in an annual period leading up to the release of new consoles (which are released in November 2013), as aging hardware and franchises struggle to convert new players. The following years should show relatively healthy growth, but due to slowing game sales in recent years, 5 percent is used to remain conservative. Cash flow (unlevered) is assumed to be NOPAT (net operating profits after taxes) after adding back non-cash charges and subtracting change in operating assets and liabilities as well as capital expenditures. This number is then discounted by a WACC of 7.5 percent over the five-year period projected.

The model's methodologies split when finding the terminal value, which has been calculated using both the multiples method and Gordon growth method. The multiples method assumes a company is worth some multiple of terminal EBITDA. This model assumed a terminal multiple of 3.8, the EV/EBITDA projected for 2013. This estimate is fairly conservative and is made more flexible in the sensitivity tables. This terminal value of \$8,967M is then discounted back to 2012 to result in a present value of \$6,246M, slightly larger than the present value of free cash flows in 2013-2014, \$6,198M.

Summing these two values yields an EV of \$12,443M, and after factoring in a balance sheet adjustment, places the implied share price at \$15.05, significantly larger than median estimates from the comparable companies analysis. Using the Gordon growth method

(assuming a terminal growth rate for free cash flow into perpetuity) implies a share price even larger at \$29.11. Finally, referencing the sensitivity tables shows per share value from \$11.73 up to \$88.88 (although these exaggerated results are clearly outliers and should be disregarded). The reasons for this disparity are the inherent dangers of the DCF model in which many important values are assumed and even small, incremental changes can yield vastly different results. A fair range of value from this model would seem to be between \$13.37 and \$19.19, drawing from conservative and modestly-aggressive assumptions from future EBITDA multiples and discount rates (as ATVI has historically had a low WACC while EBITDA multiples have lagged industry averaged). Overall, this methodology led to notably higher valuations than the previous method and attests to the benefit of utilizing multiple models before settling on a range of values.

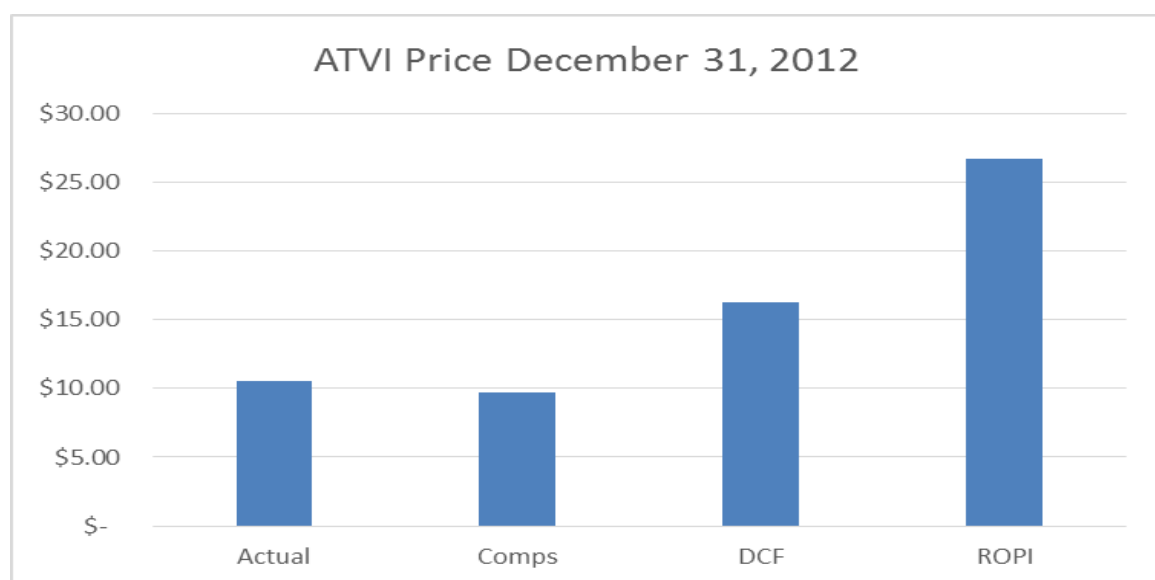
#### **Section 4.5: Residual Operating Income Model**

The final valuation method used with ATVI was the Residual Operating Income model (ROPI). This values a company as the present value of its residual operating income over five years plus its terminal value and current net operating assets (NOA). By using these specific values, the ROPI model ties in key income statement and balance sheet accounts to determine a fair value of the company.

Inputs in this model for revenue, NOPAT, NOA, and WACC were brought in from previous models, thus keeping uniform growth rate assumptions throughout the three models. ROPI was calculated as NOPAT less expected NOPAT, or NOA multiplied by WACC. Next, a terminal value for ROPI was determined using 2016 data for NOPAT and NOA. The results for ROPI were then discounted over this five-year period and summed with first historical year

(2012) NOA to arrive at EV. After tying in balance sheet adjustments, equity value was found to be \$29,011M, implying a share price of \$25.95.

Similar to previous models, sensitivity analysis is used to determine an implied share price range between \$23.80 and \$29.71. This range is greater than that of both the DCF and comparable companies' results and could be due to the relatively low discount rate which has an outsized effect on this model in the calculation of NOPAT using NOA. Other factors include the company's relatively large NOPAT in relation to NOA, leading to large ROPIs which flow throughout the model and inflate value. Investors using this model should be cautioned that share price results could be inflated and therefore would be better off using maximum percentile results for DCF, which fall in the middle of ROPI and comparable companies' values.



## **Ch. 5: Conclusions**

This paper has focused on examining ATVI with the intention of producing a well-researched and fair valuation of the company, as well as to determine a likely suitor for the company in the event of a sale or merger and acquisition scenario. However, as a testament to the dynamic nature of accounting, finance, and the capital markets, Vivendi (ATVI's parent company) achieved its desired divestiture when it sold a majority of its stake to a consortium of investors led by ATVI's CEO, Bobby Kotick. While this development makes searching for a potential suitor unnecessary, it nevertheless leads to further interesting conclusions with regard to the reasoning behind the move, the value of ATVI, and its future as a public company.

Firstly, it had been clear in early 2013 that Vivendi was looking to divest all or a portion of its stake in ATVI as part of the trimming of its diverse media holdings. This looked to be challenging as few companies had the will or ability to acquire the \$12B videogame publisher, and with the well-performing stock, it looked as if Vivendi would hold onto its stake for the foreseeable future. However from ATVI's perspective, these and other factors created a prime opportunity to shed Vivendi's controlling stake.

The initial analysis of ATVI showed a company with no long-term debt outstanding. While this significantly strengthened liquidity and solvency ratios, it gave the company little in the way of financing other than share issuances. Such a move would have been unlikely however, as the company showed an interest in returning money to investors and boosting



stock value through numerous share buyback programs initiated in recent years. This stemmed from one of ATVI's largest value propositions: its huge cash pile of almost \$4B in 2012. With a growing cash hoard and interest rates at all-time lows due to the Federal Reserve's continued quantitative easing, ATVI was well-positioned to perform the purchase and move into the next generation of gaming out from under the shadow of the French conglomerate.

A further perspective this purchase lent was the perceived value of ATVI by Vivendi and investors. Before the July 25<sup>th</sup> 2013 announcement of the agreement, shares traded at \$15.18, having seen a steady climb from \$14.28 that month. The \$13.60 purchase price announcement, while significantly lower than the current stock price, sent shares to an all-time high of \$18.27 within two days. Since the purchase was only for Vivendi's stake rather than the company as a whole, an offer lower than trading prices is reasonable and does not represent the payout investors can expect. Nevertheless, the stock has consistently stayed above \$13.60 this year (2013), topping out at \$18.43 before retreating to \$17.80 by year's end. Interestingly, the purchase price falls between the minimum and 25<sup>th</sup> percentile range of the DCF results and slightly above the median results of the trading comparables prices. This seems reasonable given the conservative valuation used for the purchase, and remains starkly lower than any ROPI predictions and higher-percentile predictions in the other methodologies. With this in mind, the purchase agreement lends credence to the accuracy of the DCF model, which most closely-aligns the purchase price and current trends with its percentile ranges.

Finally, it's important to step away from the numbers and examine ATVI as a whole. With the developments over the past several years, the company has positioned itself ever further as the largest competitive player in the dynamic and sometimes fickle market for interactive entertainment. Although it has had to step away from tenants of its financial profile

which were once its signature strengths (large cash pile, no debts), it emerges as a larger, more independent organization free from the headaches and slow growth that can accompany conglomerate ownership. It has reacted to the altered landscape of an ever-changing and impossibly unpredictable industry with confidence and adaptability with a pipeline of new and popular products. ATVI is not the easiest of companies to value, but a commitment to quality products, increased customer acquisition, and conservative financial profile is a perennially successful strategy and one any investor should feel comfortable standing behind.

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